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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

*Technical Memorandum 33-507*

*A Reduced Star Catalog Containing 537 Named Stars*

*Jack W. Rhoads*

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JET PROPULSION LABORATORY  
CALIFORNIA INSTITUTE OF TECHNOLOGY  
PASADENA, CALIFORNIA

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## PREFACE

The work described in this report was performed by the Guidance and Control Division of the Jet Propulsion Laboratory, under the cognizance of the Mariner Mars 1971 Project.

Inquiries or comments regarding the material presented in this report should be directed to Jack W. Rhoads.

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## ABSTRACT

This document is the first in a series of publications presenting data, compiled by JPL, which is to be included in the JPL Astronautical Star Catalog. Positional and color magnitude data for the 537 named stars, which are to be included in the catalog, are given. A brief translation of the star names and their source language is also presented.

## I. INTRODUCTION

The increasing use of celestial instruments aboard unmanned spacecraft has created the need for a comprehensive collection of celestial data which is in concord with the special requirements of these instruments. These instruments may be concerned with spacecraft attitude control, such as star and planet sensors, or navigational oriented instruments, such as onboard TV cameras. Evaluation of measurements from scientific instruments, such as infra-red and ultra-violet spectrometers, also require knowledge of the stellar background.

In order to meet those specialized requirements of the scientist or engineer associated with or interested in celestial sensing devices, the Jet Propulsion Laboratory (JPL) is compiling celestial and allied data which is to form the JPL Astronautical Star Catalog (JASC). When completed, the JASC will contain in one source the most accurate positions (right ascension and declinations), proper motions, and color magnitudes (such as the Johnson-Morgan U, B, V magnitudes) available for stars down to the eighth magnitude, plus other useful information.

This document is the first in a series of publications presenting data, compiled by JPL, which is to be included in the JPL Astronautical Star Catalog (JASC). All of the named stars which will appear in the JASC comprises the 537 stars of this paper.

Sections II and III and Tables 1 and 2 form the explanation for Tables 3 through 6. The star data presented in Tables 3 and 7 have been stored on magnetic tape.

## II. EXPLANATION OF THE REDUCED STAR CATALOG

The "Reduced Star Catalog Containing 537 Named Stars" consists of the data contained in Tables 3 and 7. The data presented in Table 3 has been listed alphabetically by star constellation.

Since it is often more convenient to locate desired stars by other criteria than star constellation, Table 3 has been re-ordered. These new lists are given in Tables 4 through 6. These new orderings, plus Table 3, are:

- (1) Data ordered by star constellation (Table 3).
- (2) Data ordered alphabetically by star name (Table 4).
- (3) Data ordered by increasing right ascension (Table 5).
- (4) Data ordered by decreasing visual magnitude (Table 6).

Tables 1 and 2 contain explanatory information needed in conjunction with the description of data contained in Table 3. Table 7 contains approximate translations of the 537 named stars.

### III. DESCRIPTION OF THE REDUCED STAR CATALOG

Since the columns of Tables 3 through 6 are identical, it is only necessary to discuss the data in Tables 3 and 7, which constitutes the reduced star catalog presented by this paper. Each of the columns of Table 3 (identical to those of Tables 4 through 6) is presented and described below.

#### Column 1 - Number

The star number associated with the "Reduced Star Catalog Containing 537 Named Stars."

#### Column 2 - Star designation

The star designation consists of three parameters, for instance,

55 ZET-1 AQR

The first parameter, 55, is the Flamsteed number associated with this particular star.

The second parameter, ZET-1, is the Bayer designation of this particular star. The designation ZET-1 is a computer shorthand notation for the Greek letter and superscript  $\zeta^1$ . The star designation may also be letters of the alphabet which are Bayer or Lacaille designations for stars. Table 2 lists the computer shorthand notation used for the Greek alphabet and lower case letters.

The third parameter is the abbreviation of the star constellation Aquarius in which this particular star lies. The list of constellation abbreviations which will be used by the JPL Astronautical Star Catalog is given in Table 1. It should be noted that the conventional SERPENS (SER) does not appear in the list. Since the constellation Serpens consists of two disjoint areas (serpens cauda and serpens caput), it was decided to use the abbreviations SCA and SCP for the two disjoint areas, respectively, with SCA + SCP = SER. The star designations were determined from Refs. 1, 2, and 3.

### Column 3 - Star proper name

The star names were based upon data gathered from Refs. 4, 5, and 1, with priority given in the order mentioned. That is, if a star name was not available in Ref. 4, then Ref. 5 was consulted, and etc. A great deal of license was taken with respect to star names taken from Ref. 5. Historically, many stars had common origins for their name, often deriving from the same word or phrase. This has resulted in having two or more stars sharing names which differ only slightly in spelling. Care has been taken to guarantee that each of the individually named stars have unique names.

Not all stars were individually named. Many shared a common name, usually the name being a figure formed by a group of stars. In this case, each of the stars were given the same name followed by a Roman numeral, the ordering being by increasing right ascension. Thus, if a star name is followed by a Roman numeral, then this star shares its name with at least one other star.

A third class of names appears in the list of stars. This class resembles the one above, except that letters enclosed in parentheses are used instead of Roman numerals. This class denotes a physical system (one which is gravitationally connected) of two or more stars, i.e., such as a binary system. The letters used are those designating the components of the multiple system (see Ref. 6).

Table 7 is presented as a quick source of the meaning of a star name, together with the source of the name and the language from which the name was derived. The following letters were used to denote language:

- A ARABIC
- C COPTIC
- D HINDU
- E EUPHRATEAN
- G GREEK
- H HEBREW
- I ENGLISH
- L LATIN
- N NOT KNOWN
- P PERSIAN
- T TURKISH
- Y EGYPTIAN

#### Column 4 – Right Ascension

The right ascension of the star, epoch 150.0.

#### Column 5 – Declination

The declination of the star, epoch 1950.0.

#### Column 6 – Position note (PN)

Four letters or a blank appear in this column, each denoting information concerning the right ascension and declination given. The JPL Astronautical Star Catalog will take as its fundamental source of star position and proper motion the Smithsonian Astrophysical Observatory Star Catalog (Ref. 7).

- BLANK Position is that given by Ref. 7, the Smithsonian Catalog. With the exception of one star (see B), this is true for all stars in the reduced catalog.
- B Position is that given by Ref. 3; no position is given by the Smithsonian Catalog.
- C Position given is that of the center of gravity of a multiple physical system of stars, as indicated by Ref. 3.
- L Position given is that of the center of integrated light of a multiple system of stars, as indicated by Ref. 3.
- N Position given is that of HD 37022C, as indicated by Refs. 2, 3, and 8.

#### Column 7 – Visual magnitude

Unless indicated otherwise (Column 8), this is the Johnson-Morgan V magnitude.

#### Column 8 – Visual magnitude note (VN)

Three characters and a blank denote information concerning the visual magnitude presented:

- BLANK Visual magnitude is from Ref. 9.

- C Visual magnitude is from Ref. 9 and is the combination of two or more stars whose magnitude appeared individually in Ref. 9.

S Visual magnitude is from Ref. 9 and was derived by separating a single visual magnitude into two or more components.

\* Visual magnitude is from Ref. 2.

Column 9 - Spectral class

Spectral classification in the Morgan-Keenan system, unless indicated otherwise by Column 10.

Column 10 - Spectral classification note (SN)

Information concerning source of the spectral classification:

BLANK Reference 9.

\* Reference 2.

Column 11 - Henry Draper (HD) catalog number

Henry Draper catalog number and the component (A, B, C, etc.) of multiple-star systems contributing to the visual magnitudes. The Henry Draper numbers are from Ref. 8 and the double-star information is from Ref. 6. Note that when Column 6 indicates an L or C, then the components indicated are those associated with the position also.

Column 12 - SAO catalog number

Smithsonian Astrophysical Observatory (SAO) Catalog number. See Ref. 7.

Column 13 - Star properties

Special star properties:

D Double- or multiple-star system

V Variable star

Special star properties were indicated by Refs. 1, 2, 3, 6, 7, and 8.

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Table 1. Constellations

1. AND	-	ANDROMEDA	46. LEO	-	LEO
2. ANT	-	ANTLIA	47. LMI	-	LEO MINOR
3. APS	-	APUS	48. LEP	-	LEPUS
4. AQR	-	AQUARIUS	49. LIB	-	LIBRA
5. AQL	-	AQUILA	50. LUP	-	LUPUS
6. ARA	-	ARA	51. LYN	-	LYNX
7. ARI	-	ARIES	52. LYR	-	LYRA
8. AUR	-	AURIGA	53. MEN	-	MENSA
9. BOO	-	BOOTES	54. MIC	-	MICROSCOPIUM
10. CAE	-	CAELUM	55. MON	-	MONOCEROS
11. CAM	-	CAMELOPARDALIS	56. MUS	-	MUSCA
12. CNC	-	CANCER	57. NOR	-	NORMA
13. CVN	-	CANES VENATICI	58. OCT	-	OCTANS
14. CMA	-	CANIS MAJOR	59. OPH	-	OPHIUCHUS
15. CMI	-	CANIS MINOR	60. ORI	-	ORION
16. CAP	-	CAPRICORNUS	61. PAV	-	PAVO
17. CAR	-	CARINA	62. PEG	-	PEGASUS
18. CAS	-	CASSIOPEIA	63. PER	-	PERSEUS
19. CEN	-	CENTAURUS	64. PHE	-	PHOENIX
20. CEP	-	CEPHEUS	65. PIC	-	PICTOR
21. CET	-	CETUS	66. PSC	-	PISCES
22. CHA	-	CHAMAELEON	67. PSA	-	PISCIS AUSTRINUS
23. CIR	-	CIRCINUS	68. PUP	-	PUPPIS
24. COL	-	COLUMBA	69. PYX	-	PYXIS
25. COM	-	COMA BERENICES	70. RET	-	RETICULUM
26. CRA	-	CORONA AUSTRALIS	71. SGE	-	SAGITTA
27. CRB	-	CORONA BOREALIS	72. SGR	-	SAGITTARIUS
28. CRV	-	CORVUS	73. SCO	-	SCORPIUS
29. CRT	-	CRATER	74. SCL	-	SCULPTOR
30. CRU	-	CRUX	75. SCT	-	SCUTUM
31. CYG	-	CYGNUS	76. SCP	-	SERPENS CAPUT
32. DEL	-	DELPHINUS	77. SCA	-	SERPENS CAUDA
33. DOR	-	DORADO	78. SEX	-	SEXTANS
34. DRA	-	DRACO	79. TAU	-	TAURUS
35. EQU	-	EQUULEUS	80. TEL	-	TELESCOPIUM
36. ERI	-	ERIDANUS	81. TRI	-	TRIANGULUM
37. FOR	-	FORNAX	82. TRA	-	TRIANGULUM AUSTRALE
38. GEM	-	GEMINI	83. TUC	-	TUCANA
39. GRU	-	GRUS	84. UMA	-	URSA MAJOR
40. HER	-	HERCULES	85. UMI	-	URSA MINOR
41. HOR	-	HOROLOGIUM	86. VEL	-	VELA
42. HYA	-	HYDRA	87. VIR	-	VIRGO
43. HYI	-	HYDRUS	88. VOL	-	VOLANS
44. IND	-	INDUS	89. VUL	-	VULPECULA
45. LAC	-	LACERTA			

Table 2. Computer abbreviations of Greek alphabet  
and lower case letters<sup>a</sup>

Greek		Lower case	
Abbreviation	Symbol	Abbreviation	Letter
ALP	$\alpha$	-A	a
BET	$\beta$	-B	b
GAM	$\gamma$	-C	c
DEL	$\delta$	-D	d
EPS	$\epsilon$	-E	e
ZET	$\zeta$	-F	f
ETA	$\eta$	-G	g
THE	$\theta$	-H	h
IOT	$\iota$	-I	i
KAP	$\kappa$	-J	j
LAM	$\lambda$	-K	k
MU	$\mu$	-L	l
NU	$\nu$	-M	m
XI	$\xi$	-N	n
OMI	$\circ$	-O	o
PI	$\pi$	-P	p
RHO	$\rho$	-Q	q
SIG	$\sigma$	-R	r
TAU	$\tau$	-S	s
UPS	$\upsilon$	-T	t
PHI	$\phi$	-U	u
CHI	$\chi$	-V	v
PSI	$\psi$	-W	w
OME	$\omega$	-X	x
		-Y	y
		-Z	z

<sup>a</sup>Superscripts are denoted as follows: ALP-1 implies  $\alpha^1$   
-H-2 implies  $h^2$

TABLE 3  
STAR NAMES AND STAR DATA ORDERED BY STAR CONSTELLATION

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RI-ASCEN. HR MIN SEC			DECLINATION DEG MIN SEC			P VISUAL MAG.			S SPECTRAL CLASS			HENRY DRAPER CAT. NO.			STAR PROP.		
			01	34	54.636	+4	8	22	32.66	+3	.57C	K3	III	9927	37375	37225	37765	358	54471	
1	51	AND NEBUS	01	27	05.505	06	45	00	.17	+5	.26D	KC	III	9057	37225	37765	0			
2	49 A	AND TAIL	01	05	47.841	+2	8	48	52.12	+2	.074	B8	III P	358						
3	21 ALP	AND ALPERIAZ	00	05	55.456	+3	5	21	.74	+2	.06D	M0	III	6860						
4	43 BET	AND MIRACH	01	06	49.177	+4	2	05	21.01	+2	.179	S	III	125334	37734	0				
5	57 GAM-1	AND ALMACH	02	00	23.03	+4	5	16	02.87	+4	.467	K0	III-V	9207	37155					
6	46 XI AND 4D-IL	SADALHELIK	01	19	12.945	-0	0	33	4E.59	+2	.933	S2	IB	209750	145862					
7	34 ALP	AQR SADALSUUD	22	03	35.649	-0	5	47	31.68	+2	.379	G0	IB	204967	145457	D				
8	22 BET	AQR SADACBIA	22	19	04.820	-0	1	38	23.7	+3	.845	A0	V	212051	146044	D				
9	48 GAM	AQR SKAT	22	51	53.901	-1	6	05	11.92	+3	.266	A3	V	216627	165375					
10	76 DEL	AQR ALBALI	20	44	58.217	-0	9	40	4E.21	+3	.77C	A1	V	198001	144810					
11	2 EPS	AQR ALSAQ (3)	22	26	15.261	-0	0	16	35.27	+4	.493	S	IV	213051A	146107	D				
12	55 ZET-1	AQR ANC-1A	22	26	15.513	-0	C	16	3E.09	+4	.323	S	IV	213052B	146108	D				
13	55 ZET-2	AQR ANC-1A	22	14	11.766	-0	8	01	58.75	+4	.155	S8	III-V	211391	145931					
14	43 THE	AQR SITULA	22	35	10.023	-0	4	29	11.39	+5	.025	K2	III	214376	145210					
15	63 KAP	AQR ALBULAN I	20	49	57.474	-0	9	10	19.16	+4	.723	A8	H	198743	144895					
16	6 MU	AQR ALBULAN II	21	06	52.3L7	-1	1	39	31.13	+4	.507	S8	III	201381	164182					
17	13 NU	AQR SADALMIK	22	00	43.657	-0	2	23	51.13	+4	.745	B8	V E	209409	145837					
18	31 OMI	AQR SEAT	22	22	43.181	+0	1	07	22.87	+4	.56C	B1	V PE	212571	12512C					
19	52 PI	AQR ALTAIR	19	48	20.559	+0	8	44	05.71	+0	.753	A7	IV-V	187642	125122	D				
20	53 ALP	AQL ALS-HAIN	19	52	51.383	+0	6	16	4E.84	+3	.714	G8	IV	188542	125235	C				
21	60 BET	AQL TARAZED	19	43	52.007	+1	0	29	24.38	+2	.717	K3	II	186791	105223					
22	50 GAM	AQL ALHIZAN I	19	22	58.597	+0	3	00	46.98	+3	.356	F0	IV	1826403	126603					
23	30 DEL	AQL D-ANAS AL OKAB	19	57	21.118	+1	4	59	56.41	+4	.020	K2	III	176411	104318	D				
24	13 EPS	AQL DENEB OKAB	19	C3	06.617	+1	3	47	1E.86	+2	.989	S9	V	177724	104461	D				
25	17 ZEI	AQL ALMIZAN II	19	49	55.525	+0	0	52	33.23	+3	.500	* F6	IB	187329	125159					
26	55 ETA	AQL ALMIZAN III	20	08	43.453	-0	C	58	1E.06	+3	.245	B9	5.5II	191652	14415C					
27	65 THE	AQL AL THAI MAIN II	19	34	08.066	-0	1	01	23.55.88	+4	.360	B5	III	184930	143597	D				
28	41 IOT	AQL AL THAI MAIN III	19	C3	35.688	-0	4	57	32.74	+3	.433	B8	V	177756	143021					
29	16 LAM	AQL GARANI I	02	37	45.145	+2	6	50	5U.75	+5	.295	A3	V	166284	75510	C				
30	33	AQL BARANI II	02	40	30.651	+2	2	29	4E.29	+4	.65C	B3	V	169008	75532					
31	35	AQL BARANI III	02	44	55.469	+2	9	02	26.66	+4	.513	K1	III	17361	17578	D				
32	39	AQL NAIR AL BUTAIN	02	47	02.016	+2	1	03	20.55	+3	.61C	B8	V	17573	175596	D				
33	41 -C-1	AQL HAMAL	02	04	20.317	+2	3	13	37.07	+2	.009	K2	III	12929	75151					
34	13 ALP	AQL SHERATAN	01	51	52.340	+2	0	33	52.09	+2	.626	A5	V	11636	75012					
35	6 BET	AQL MESARTIN (8)	01	50	46.355	+1	9	03	06.11	+4	.673	S	AI P	115028	92630	D				
36	5 GAM-1	AQL MESARTIN (4)	01	50	46.912	+1	9	02	57.87	+4	.534	S	V	115034	92681	D				
37	5 GAM-2	AQL BOTINE	03	08	45.985	+1	9	32	20.22	+4	.350	K2	III	19787	93328	D				
38	57 DEL	AQL AL BUTAIN III	02	56	2C.825	+2	1	09	2E.91	+4	.638	A2	V	18519/048	75673	D				
39	48 EPS	AQL AL BUTAIN IV	03	12	01.326	+2	0	51	37.93	+4	.397	AC	IV-V	20150	75810					
40	59 ZET	AQL KOLEON	02	39	32.488	+1	9	03	06.11	+4	.66C	A0	IV-V	16811	93052	D				
41	34 MU	AQL BUTAIN I	02	46	29.805	+1	7	15	27.06	+5	.340	S6	IV	17543A	92681	D				
42	42 PI	AQL BUTAIN II	02	53	36.479	+1	7	17	4C.02	+5	.5CC	DF5	*	18256	93195	D				
43	46 RHO	AQL CAPELLA	05	12	59.466	+4	5	56	58.04	+0	.062	S8	III+F	34029AP	40186	O				
44	13 ALP	AQL MENKALMAN	05	55	51.579	+4	9	56	4C.69	+1	.9CC	A2	V	40183AP	40750	D				
45	34 BET	AQL ALANZ	04	59	22.530	+4	4	55	05.36	+2	.379	FO	IA	16811	93052	D				
46	7 EPS	AQL HAEDUS I	04	58	58.690	+4	1	00	1E.79	+3	.8CC	K5	II+B	*	31964	39955	D			
47	8 ZET	AQL HAEDUS II	05	03	00.214	+4	1	10	03.39	+3	.171	B3	V	32068/5	39966	D				
48	10 ETA	AQL MAJASIM	05	56	19.627	+3	7	12	4C.05	+2	.66C	B9	5V P	32330	40026	D				
49	37 THE	AQL KABALINAN	04	53	43.982	+3	3	05	19.94	+2	.692	K3	II	31998	58636	D				
50	3 IOI													31998	57522	D				

TABLE 3 CONTINUED  
STAR NAMES AND STAR DATA ORDERED BY STAR CONSTELLATION

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RT. ASCEN. HR MIN SEC			DECLINATION DEG MIN SEC			VISUAL MAG.	SPECTRAL CLASS	SAO* CAT. N.	HENRY DRAPPER CAT. NO.	STAR PROP.	
			05	15	37.211	00	03	24.51						
51	15 LAM	AUR AL-TIBA II	05	15	37.211	00	03	24.51	+4.71C	60	V	34411A	40233	C
52	11 MU	AUR AL-TIBA I	05	10	00.157	+38	25	38.27	+4.96D	4	M	33641	57755	D
53	21 SIG	AUR AL-TIBRA III	05	21	15.660	+31	20	26.65	+4.96E	K4	III	35186	57981	D
54	46 PSI-1	AUR DOLONES I	06	21	02.880	+49	19	56.91	+4.96G	K4	IAB	44537	41076	
55	50 PSI-2	AUR DOLONES III	06	35	45.703	+42	32	06.13	+4.78E	K3	III	47174	41239	
56	52 PSI-3	AUR DOLONES II	06	35	20.236	+33	56	51.00	+5.20D	B8	III	47100	59313	
57	55 PSI-4	AUR DOLONES IV	06	39	26.146	+44	34	25.11	+5.027	K5	III	47194	41288	
58	56 PSI-5	AUR DOLONES V	06	43	08.206	+43	37	45.74	+5.24D	G0	V	496824	41330	O
59	57 PSI-6	AUR DOLONES VI	06	43	50.596	+48	50	40.75	+5.21C	K1	III	49781	41346	
60	58 PSI-7	AUR DOLONES VII	06	47	13.920	+41	50	32.27	+5.005	K3	III	49520	41380	
61	61 PSI-8	AUR DOLONES VIII	06	50	31.742	+38	34	05.87	+6.24C	B9	P	50204	59589	
62	62 PSI-9	AUR DOLONES IX	06	52	50.483	+46	20	23.28	+5.75E	B8	IV	50658	41446	
63	38 -H	B00 MERTA	14	47	31.671	+46	19	25.56	+5.71C	*DF9	*	130945	45226	
64	16 ALP	300 ARCTURUS	14	13	22.750	+13	26	30.95	-0.05D	K2	III P	124997	100944	
65	92 BET	B00 NEKKAR	15	00	03.664	+4C	35	12.80	+3.48B	G8	III	133208	45337	
66	27 GAM	B00 SEGNIKUS	14	30	03.837	+38	31	34.12	+3.73E	A7	III	127762	64203	D
67	49 DEL	B00 THIBA	15	13	29.117	+32	30	01.20	+3.47B	G8	III	1357224	64589	C
68	36 EPS	B00 IZAR	14	42	48.137	+27	17	02.66	+2.37J	A2	V+KQII	129988/343	83500	O
69	8 ETA	B00 MUPARIO	13	52	18.168	+18	38	51.35	+2.63E	G0	IV	121370	10766	
70	23 THE	300 PRIMUS ASELLUS	14	23	29.610	+52	04	52.32	+4.04E	F7	V	126660	29137	
71	21 IOT	300 SECUNDUS ASELLUS	14	14	23.613	+51	35	45.93	+4.75C	A7	V	1251614	29071	C
72	17 KAP-1	300 TERTIUS ASELLUS (B)	14	11	40.271	+52	01	15.47	+6.63B	F2	V	1246748	29045	C
73	17 KAP-2	300 TERTIUS ASELLUS (A)	14	11	41.518	+52	01	23.55	+4.53C	A7	IV	12467548	29046	C
74	19 LAM	B00 AULAD AL-TIBA	14	14	28.963	+46	19	01.94	+4.17B	A0	P	125152	44955	
75	51 MU -1	B00 AL-KALUR CPS	15	22	35.595	+37	33	05.49	+4.3C6	F0	V	1373914	64686	C
76	54 PHI	B00 CEGINUS	15	36	01.742	+40	30	55.00	+5.29D	G8	III-IV	139641	45643	
77	43 PSI	B00 AULAD AL-NAT-LAT	15	02	18.094	+27	08	2.75	+4.52E	K2	III	133582	83645	
78	65 ALP	CNC ACUBENS	08	55	46.247	+12	03	09.07	+4.22B	A	M	76756	98267	J
79	17 BET	CNC AL TARF	09	13	43.282	+02	20	27.73	+3.52J	K4	III	69267	116565	O
80	43 GAM	CNC ASCELLUS BOREALIS	08	40	23.702	+21	38	58.92	+4.57D	A1	V	74198	80378	
81	47 DEL	CNC ASCELLUS AUSTRALIS	08	41	50.747	+18	20	21.83	+3.935	K0	III	74442	98087	O
82	41 EPS	CNC ALMALAF	09	37	35.068	+19	43	23.07	+6.30D	A6	III	73731	98024	
83	16 ZET-1	CNC TEGRINE (AB)	08	09	20.153	+17	41	55.93	+5.05C	F8	V	68256/7AB	97645	C
84	16 ZET-2	CNC TEGRINE (C)	08	09	21.213	+17	47	58.39	+6.20D	DF2		69255C	97646	O
85	48 IOI-1	CNC ZUBANAH (B)	08	43	38.695	+28	56	51.95	+6.57C	A3	V	747388	80416	O
86	48 IOI-2	CNC ZUBANAH (A)	09	43	40.514	+28	56	39.13	+4.30D	G9	II	747394	80416	O
87	19 LAM	CNC PIAUTOS	08	17	33.902	+24	1C	52.39	+5.31C	B9	V	70011	80113	
88	77 XI	CNC NAHN	09	06	29.235	+22	14	55.95	+5.14D	K0	III	79515	80666	
89	2 BET	CVN LA SUPERBA	13	03	37.463	+45	32	07.73	+5.6CC	K1	III	113847	44465	C
90	12 ALP-1	CVN COR CAROLI (B)	12	53	40.203	+38	35	03.92	+5.61C	F0	V	1124128	63256	O
91	12 ALP-2	CVN COR CAROLI (A)	12	53	41.478	+38	35	16.82	+2.88Z	F0	P	1124134	63257	O
92	8 BET	CVN C-ARA	12	31	22.283	+41	37	44.10	+4.266	GU	V	103358	44230	
93	9 ALP	CMA SIRIUS	06	42	56.713	-16	39	46.37	C	A1	V+WD A	46915AB	151881	C
94	2 BET	CMA MIRZAH	06	20	29.789	-17	55	47.23	+1.39D	B1	II-III	44743	151428	
95	23 GAM	CMA MIRZA	07	01	29.713	-15	33	28.79	+4.1C5	B6	II	53244	152303	
96	25 DEL	CMA WEZEN	07	06	21.436	-26	18	45.36	+1.83B	F8	IA	54605	173047	
97	26 EPS	CMA AD-HARA	06	56	39.587	-28	54	1C.24	+1.5CC	B2	II	52089AB	172676	C
98	1 ZET	CMA FURUD	06	18	23.546	-30	02	23.86	+3.024	B2.5V		44402	196698	
99	31 ETA	CMA ALUDRA	07	22	06.872	-29	12	16.04	+2.44C	B5	IA	58350	173651	
100	18 MU	CMA ISIS	06	53	49.103	-13	59	38.75	+4.93D	SS	A2	51250/1AB	152123	O

TABLE 3 CONTINUE  
STAR NAMES AND STAR DATA ORDERED BY STAR CONSTELLATION

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RT. ASCEN. HR MIN SEC	DECLINATION DEG MIN SEC	P	VISUAL MAG.	S	HENRY DRAPER IND CAT. NO.	SAO CAT. NO.	STAR PROP.
101	16 OMI-1	CMA UDRA	06 52 03	+36 22 -24	07	12 -87	K3	IAB	50877	172542
102	24 OMI-2	CMA AL ZARA	07 00 56	-14 22 -23	45	32 -46	B3	IA	53135	172839
103	10 ALP	CMI PRCCYON	07 36 41	-11 17 +05	21	16 -81	C	IV-V	614214B	115756
104	3 BET	CMI GOMEISA	07 24 26	-35 57 +08	23	29 -89	+2 -39	IB	58715	115456
105	5 ALP-1	CAP PRIMA GIEDI	20 14 52	-52 47 -12	39	51 -04	+4 -24	G3	192876A	163422
106	6 ALP-2	CAP SECUNDA GIEOI	20 15 16	-37 38 -12	42	04 -49	+3 -56	G9	192944AB	163427
107	1 BET-1	CAP DABII MINOR	20 17 58	-C71 -14	56	38 -31	+6 -16	*	193452AB	163471
108	9 BET-2	CAP DABII MAJOR	20 18 12	-20 00 -14	56	26 -57	+3 -07	F8	193495/6	163481
109	40 GAM	CAP NASHIRA	21 37 19	-37 22 -16	53	21 -05	+3 -66	A8	206088	164566
110	49 DEL	CAP GENEB AL GEDI	21 44 16	-39 22 -16	21	18 -42	+2 -83	*	207098A	164644
111	8 NU	CAP AL SHAT	20 17 53	-48 55 -12	55	04 -45	+4 -75	B3	193432A	163468
112	18 ALP	CAR CANOPUS	06 22 50	-49 32 -52	40	03 -45	+0 -72	FQ	IA	45348
113	BET	CAR MIAPLACIDUS	09 12 39	-66 22 -69	30	35 -63	+1 -67	AD	80007	2500495
114	EPS	CAR AVIOR	08 21 29	-38 33 -59	20	52 -98	+1 -88	KO	7129/0	235932
115	IOI	CAR ASPICISKE	09 15 45	-10 09 -53	03	53 -70	+2 -24	FO	IB	80404
116	18 ALP	CAS SC-EDAR	00 37 33	-31 3 -56	15	48 -70	+2 -22	KO	31248	DV
117	11 BET	CAS CAP-1	00 06 29	-7 15 +58	52	26 -77	+2 -27	F2	IV	43248
118	27 GAM	CAS NAVI	00 53 40	-32 24 +60	26	47 -38	+2 -57	SO	IV E	539443
119	37 DEL	CAS RUCH-BAH	01 22 31	-19 08 +59	59	34 -36	+2 -67	A5	8538	11482
120	45 EPS	CAS SEGIN	01 00 46	-37 38 +63	25	29 -89	+3 -37	SO	11415	22031
121	33 THE	CAS MARFAK	01 08 46	-55 54 +54	53	04 -32	+4 -32	A7	6961	22070
122	30 MU	CAS AL MARFAK	01 04 55	-68 65 +54	40	32 -96	+5 -16	SS	6582	22024
123	ALP	CEN RIGIL KENTAUROS	14 36 11	-25 3 -80	37	46 -84	+4 -05	*	128620/1AB	252838
124	BET	CEN YADAR	14 00 16	-51 10 -60	07	58 -09	+0 -61	BI	122451	252582
125	GAM	CEN MU-LIFAIN	12 38 44	-89 08 -48	41	02 -32	+2 -15	SO	110304B	223603
126	ZET	CEN BATEN KENTAUROS	13 52 24	-51 0 -47	02	34 -97	+2 -54	SO	121263	2244538
127	5 THE	CEN MENKENI	14 03 43	-87 7 -16	07	25 -64	+2 -07	KO	123139	2C5188
128	5 ALP	CEP ALDERAMIN	21 17 23	-18 1 +62	22	23 -74	+2 -43	A7	203280A	19302
129	8 BET	CEP AL FIRK	21 28 01	-32 26 +70	20	27 -85	+3 -18	*	10057	DV
130	35 GAM	CEP ERRAI	23 37 16	-53 33 +77	21	11 -73	+3 -32	SO	122404	10818
131	3 ETA	CEP KABALFIRO	20 49 16	-49 08 +61	38	38 -86	+3 -42	KO	198149A	19019
132	2 THE	CEP AL KIDR	20 29 44	-67 79 +62	43	32 -32	+4 -20	SO	195725	18897
133	1 KAP	CEP AL AGH-NAM I	20 10 36	-57 47 +77	33	42 -36	+4 -37	B9	1929C7AB	9665
134	MU	CEP ERAKIS	21 41 53	-50 01 +59	07	58 -09	+3 -99	*	206939A3	33693
135	17 XI -1	CEP KUR-YAH (B)	22 02 19	-19 3 -64	23	03 -30	+6 -35	SO	205790B	19826
136	17 XI -2	CEP KUR-YAH (A)	22 02 20	-44 0 +64	23	04 -68	+4 -45	SO	207979A	19827
137	33 PI	CEP AL AGH-NAM II	23 06 18	-CC7 +75	07	01 -56	+4 -97	G2	2196584B	10629
138	29 RHO	CEP KAL BALRAI	22 59 39	-7 43 6 +78	34	03 -36	+5 -52	*	213739	10402
139	92 ALP	CET MENKAR	01 06 04	-42 0 -10	53	41 -15	+2 -51	H2	18884	110920
140	16 BET	CET DENEB KAITOS	00 41 04	-81 1 -18	15	38 -78	+2 -02	KJ	4129	147420
141	86 GAM	CET KAFALGIEMA	02 40 42	-39 7 +63	01	34 -05	+3 -45	SO	169704B	110707
142	82 DEL	CET AL KAFF AL JID-MAH III	02 36 54	-39 5 +00	06	50 -00	+4 -06	B2	16582	110665
143	83 EPS	CET SA'DR AL KAITOS III	02 37 08	-59 2 -12	05	00 -36	+4 -83	F5	166204B	148528
144	55 ZET	CET BATEN KAITOS	01 48 59	-44 7 -10	34	52 -90	+3 -72	K2	11353	148059
145	31 Eta 4	CET DENEB ALGENUBI	01 06 04	-42 0 -10	26	48 -53	+3 -43	K3	6805	147632
146	45 THE	CET AL NAYMAT I	01 21 31	-36 3 -08	26	27 -16	+3 -50	KO	8512A	129274
147	8 101	CET SCHEMALI	00 16 52	-78 4 -03	06	33 -44	+3 -54	K2	1522A	128694
148	91 LAM	CET MENKA'B	02 57 01	-87 1 +08	92	33 -54	+4 -69	SO	18604	110889
149	87 MU	CET AL KAFF AL JID-MAH IV	02 42 14	-1C2 +69	54	15 -02	+4 -26	FQ	17094	110723
150	65 XI -1	CET AL KAFF AL JID-MAH I	02 10 20	-74 7 +08	36	47 -36	+4 -36	SO	13611	1104C8

TABLE 3 CONTINUED  
STAR NAMES AND STAR DATA ORDERED BY STAR CONSTELLATION

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RT. ASCEN. HR MIN SEC			DECLINATION DEG MIN SEC			P N	VISUAL MAG.	SPECTRAL CLASS	HENRY DRAPER CAT. NO.	SAO* CAT. NO.	STAR PROP.	
			02	25	29.791	+68	14	13.15							
151	73 XI -2 CET	AL KAFF AL JID-MAH II	02	25	29.791	+68	14	13.15	+4	211	89	III	15318	110543	
152	68 OMI	CET MIRA	02	16	49.045	-03	12	13.39	+2	000	*	GME	143864P	129825	
153	89 PI	CET SADR AL KAITOS IV	02	41	44.470	-14	04	10.11	+4	215	87	V	17081	148575	
154	72 RHQ	CET SADR AL KAITOS I	02	23	31.355	-12	30	54.30	+4	880	89	V	15130	148385	
155	76 SIG	CET SADR AL KAITOS II	02	29	42.948	-15	27	47.46	+4	746	F5	IV-V	15798	148445	
156	52 TAU	CET AL NAYMAT II	01	41	44.660	-16	12	00.50	+3	946	G8	V P	10700	147986	
157	59 UPS	CET AL NAYMAT III	01	57	38.911	-21	19	05.71	+3	950	MI	III	12274	167471	
158	17 PHI-1 CET	AL NITHAM I	00	41	40.024	-10	52	53.43	+4	750	KD	III	4188	147423	
159	19 PHI-2 CET	AL NITHAM II	00	47	37.298	-10	59	47.65	+5	168	F8	V	4613	147476	
160	22 PHI-3 CET	AL NITHAM III	00	53	34.022	-11	32	13.09	+5	300	K4	III	5437	147519	
161	23 PHI-4 CET	AL NITHAM IV	00	56	13.593	-11	38	56.40	+5	750	*	667	5722	147546	
162	ALP COL	P-HACT	05	37	50.211	-34	05	58.73	+2	630	B8	V E	37795	196059	
163	BET COL	WAZN	05	49	11.727	-35	47	09.73	+3	11C	K2	III	39425	196240	
164	THE COL	KURUD I	06	05	48.671	-37	19	41.29	+5	010	B9	42167	196514		
165	KAP COL	KURUD II	06	14	46.278	-35	07	22.03	+4	605	68	III	43785	196643	
166	21 UU COM	KISSIN	12	28	30.830	+24	50	35.38	+5	455	A3	P	108945	82346	
167	42 ALP COM	DIADEM	13	07	33.321	+17	47	36.25	L	+4	318	F5	V 114378/948	1C0443	
168	15 GAM COM	AL DAFTIRAH	12	24	26.870	+28	32	46.07	+4	353	K1	III-IV	108381	82313	
169	16 ALP CRA	AL FECCA MERIDIANA	19	06	04.345	-37	59	03.49	+4	1CC	A2	N	178990	84015	
170	R CRB	VARIABLES CORONAE	15	46	30.695	+28	13	32.24	+5	800	*	F	184015	V	
171	1 CRB	BLAZE STAR	15	57	24.5C5	+26	03	35.04	+2	0CC	*	PEP	181527	84129	
172	5 ALP CRB	ALP-4-ECCA	15	32	34.145	+26	52	54.75	+2	230	*	PEC	143454	N	
173	3 BET CRB	NUSAKAN	15	25	45.944	+29	16	37.26	+3	668	AO	V	139006	83893	
174	1 ALP CRV	ALCHIBA	12	05	49.746	-24	27	00.13	+4	013	FQ	III	137909	83831	
175	9 BET CRV	KRAZ	12	31	45.342	-23	07	13.60	+2	666	G5	III	180915	105452	
176	4 GAM CRV	GIE-NAY	12	13	13.843	-17	15	51.94	+2	589	88	III	109379	157176	
177	7 DEL CRV	ALGORAB	12	27	16.380	-16	14	14.14	+2	399	89	V	108767A	157323	
178	2 EPS CRV	MINKAR	12	07	32.913	-22	20	30.12	+2	93	K3	III	105707	156375	
179	7 ALP CRT	ALKES	10	57	2C.118	-18	01	55.62	+9	066	KD	III	95222	156375	
180	11 BET CRT	AL SWARASIF II	11	09	11.730	-22	33	08.93	+4	467	A2	III-IV	97277	179624	
181	ALP-1 CRU	ACRUX (A)	12	23	48.664	-62	49	15.43	+1	312	S	BI	108248A	251904	
182	ALP-2 CRU	ACRUX (B)	12	23	49.695	-62	49	22.28	B	+1	323	S	83	N	
183	BET CRU	MIMOSA	12	44	47.637	59	24	56.27	+1	265	BC	.5IV	1082498	D	
184	GAM CRU	GACRUX	12	28	22.727	-56	50	00.33	+1	620	M3	II	111273	240259	
185	34 P CYG	REVENATE OF THE SWAN	20	15	56.500	+17	52	35.55	+4	93C	*	B	109003A	240019	
186	50 ALP CYG	DENEBO	20	39	43.539	+45	06	03.12	+1	248	A2	IA	1973454	N	
187	6 BEI-1 CYG	ALBIREO (A)	19	28	42.222	+27	51	12.44	+3	080	K5	II+B	183912/3A	49941	
188	6 BEI-2 CYG	ALBIREO (B)	19	28	44.302	+27	51	32.69	+5	110	BB	V	183914B	87301	
189	37 GAM CYG	SADR	20	20	25.927	+40	05	44.88	+2	214	FB	IB	134093A	49528	
190	18 DEL CYG	FAWARIS II	19	43	24.671	+45	00	28.23	C	+2	370	89.5III	69773		
191	53 EPS CYG	AL JANAH	20	44	11.168	+33	46	55.15	+2	457	KD	III	197969A	49941	
192	64 ZET CYG	FAWARIS III	21	10	49.357	+30	01	15.51	+3	192	G8	II	202109	D	
193	1 KAP CYG	FAWARIS I	19	15	56.786	+53	16	31.88	+3	713	KD	III	181276	31537	
194	80 PI -1 CYG	AZEL FAGE	21	40	19.952	+50	57	39.10	+4	665	B3	IV	206672	33665	
195	45 OME-1 CYG	RUCBA	20	28	30.540	+48	46	57.97	+4	95C	B2	V	195556AB	49712	
196	9 ALP CYG	SVALOCIN	19	37	19.874	+15	44	04.30	+3	766	89	V	196882AB	D	
197	6 BET DEL	ROTANEV	20	35	12.206	+14	25	1.31	C	+3	563	F5	IV	19687A	106357
198	12 GAM-1 DEL	AL SALIB (2)	20	44	19.473	+15	56	34.71	+5	140	F7	V	1973638	106475	
199	12 GAM-2 DEL	AL SALIB (A)	20	44	2C.236	+15	56	34.82	+4	27C	K2	IV	197964A	106476	
200	11 DEL DEL	AL UKUD	20	41	07.413	+14	53	38.69	+4	420	A7	III P	197461	106425	

TABLE 3 CONTINUED  
STAR NAMES AND STAR DATA ORDERED BY STAR CONSTELLATION

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			20	20	49.400	11	07	55.93						
201	2 EPS	DEL DENE'B DULFIM	17	42	56.440	+53	49	13.34	*5.730	A0	KC	III	*161693	30538
202	2C2	DRA ALRUBAH	17	32	59.543	+68	1C	01.20	*5.66C	KC	III	15936	17526	
203	27 -F	DRA ADFAR ALDIB I	14	03	01.363	+64	36	51.57	*3.652	A0	III	123299	16273	
204	11 ALP	DRA T-USAN	17	29	18.053	+52	26	15.65	*2.75	K2	III	159181AB	30429	
205	23 BET	DRA RASTABAN	17	55	26.576	+51	29	38.53	*2.251	K5	III	16405848	30653	
206	33 GAM	DRA EL-TANIN	19	12	32.824	+67	34	25.03	*3.C67	G9	III	180711	18222	
207	57 DEL	DRA ALTAIS	13	49	21.053	+70	09	26.55	*3.33	G9	III	18811948	9540	
208	63 EPS	TYL	17	C8	39.146	+65	46	33.95	*3.17	B6	III	155763	17365	
209	22 ZET	DRA DHISAH	16	23	19.476	+61	37	37.10	*2.730	G9	III	14838743	17074	
210	14 ETA	DRA DHIBAIN	15	23	49.741	+53	08	2E-16	*3.256	K2	III	137752	2952C	
211	12 IOI	DRA EDASICH	11	28	27.546	+63	36	26.09	*3.927	MG	III	100023	15532	
212	1 LAM	DRA GIAUSAR	17	C4	17.357	+54	52	07.95	L	F5	III	154905/EAB	30239	
213	21 MU	DRA ALRAKIS	17	31	11.293	+55	13	04.07	*4.990	A	H	159541B	30447	
214	24 NU -1	DRA ALWAID (A)	17	31	16.713	+55	12	22.82	*4.817	A	H	15556CA	30450	
215	25 NU -2	DRA ALWAID (B)	17	52	39.700	+56	52	47.68	*3.737	K2	III	163598	30631	
216	32 XI	DRA GRUMIUM	13	20	24.896	+65	37	05.16	*4.582	A2	IV	182564	18299	
217	58 PI	DRA TAIS I	20	02	35.927	+67	43	51.21	*4.513	K3	III	19034D	18676	
218	67 RHO	DRA TAIS II	19	32	27.595	+69	34	34.11	*4.E5E	KU	V	185144	18396	
219	61 SIG	DRA ALSAFI	13	16	31.472	+73	15	47.87	*4.455	K3	III	181994	9366	
220	60 TAU	DRA AT-HAFI I	19	55	CG.917	+71	13	50.82	*4.81C	KO	III	176524	9283	
221	52 UPS	DRA AT-HAFI I	18	21	28.505	+71	19	42.23	L	F4.50	A0	P	17000048	9084
222	43 PHI	DRA AL-DIBA	18	21	57.480	+72	42	42.15	*3.567	F7	V	170153	9087	
223	44 CHI	DRA ALAHAKAN	17	42	49.282	+72	10	26.21	*4.594	F5	IV-V	1620034	8890	
224	31 PSI-1	DRA OZIBAN I	17	42	5C.923	+71	10	55.38	*5.8C5	FB	V	1620448	8891	
225	31 PSI-2	DRA OZIBAN II	17	37	14.343	+63	46	52.43	*4.000	F5	V	160922	17576	
226	28 OME	DRA ADFAR ALDIB II	21	13	19.400	+65	02	24.35	*2.935	G0	III+45	20444/F	295034B	
227	8 ALP	EQU KITALP-14	04	35	33.315	-14	29	01.60	*3.958	K2	III	149781	0	
228	53 -L	ERI SCEPTRUM	C1	35	51.3C7	-57	23	24.53	*C.49C	B5	V	10144	23481	
229	42 ALP	ERI ACERNAR	05	05	23.365	-05	09	58.54	*2.775	A3	III	33111	131794	
230	67 BET	ERI CURSA	C3	55	41.672	-13	59	52.17	*2.83	M0	III	250254	149283	
231	34 GAM	ERI ZAURAK	03	40	51.035	-09	55	53.05	*3.51D	KO	IV	23249	130686	
232	23 DEL	ERI RANA	C3	13	24.143	-C3	00	1E.50	*4.33B	A7	M	20320	130387	
233	13 ZET	ERI ZIBAL	02	53	58.952	-09	05	45.89	*3.387	K1	III-IV	19322	130197	
234	.3 ETA	ERI AZ-4	04	12	58.161	-C1	43	45.84	*4.473	K1	V	26955A	131063	
235	THE-1	ERI ACAMAR (A)	02	56	21.882	-40	30	1E.15	*3.264	S	V	18784	216113	
236	THE-2	ERI ACAMAR (B)	02	56	41.573	-40	30	1E.34	*4.263	S	V	196224	130243	
237	69 LAM	KURSI AL JAUZAH II	03	CO	14.692	-C7	52	51.43	*5.31C	G66	III	130254	0	
238	38 OMI-1	ERI BEID	03	01	43.952	-07	47	43.01	*5.257	A3	V	13107	130269	
239	40 OMI-2	ERI KEID	04	09	25.339	-06	57	59.74	*4.055	F2	II-III	17624A	168094	
240	9 RHO-2	ERI ALUDHI I	04	12	58.161	-C1	43	45.84	*4.473	K1	V	29085	169570	
241	9 RHO-2	ERI ALUDHI II	02	58	42.365	-07	51	31.98	*5.49C	KO	III	25291	195148	
242	10 RH0-3	ERI BEEMIM I	04	22	03.403	-34	07	54.81	*3.960	M1	III	28028	194984	
243	2 TAU-2	ERI ANSELENAR	04	16	00.C36	-23	55	0E.65	*3.553	B8	.5V	273764E	1949C2	
244	50 UPS-1	ERI BEEMIM II	04	31	32.813	-23	51	53.49	*4.50D	G6	III	32249	131700	
245	52 UPS-2	ERI THREEMIN	04	13	36.315	-3C	39	4E.36	*3.81C	D66	V	60178/SAB	60198	
246	43 UPS-3	ERI BEEMIM II	04	22	03.403	-34	07	54.81	*3.960	M1	III	28028	194984	
247	41 UPS-4	ERI BEEMIM I	04	16	00.C36	-23	55	0E.65	*3.553	B8	.5V	273764E	1949C2	
248	65 PSI	KURSI AL JAUZAH I	04	59	00.753	-07	14	44.38	*4.795	A2	V	32249	60178/SAB	
249	66 ALP	CASTOR	07	31	24.654	+21	53	55.07	*1.58C	A	M+41 V	60198	D	
250	78 BET	POLLUX	07	42	15.517	+28	03	55.11	*1.196	KO	III	625094	79666	

TABLE 3 CONTINUED  
STAR NAMES AND STAR DATA ORDERED BY STAR CONSTELLATION

NUMBER	STAR DESIGNATION	PROPER NAME	RI. ASCEN. HR MIN SEC			CECLINATION DEG MIN SEC			P	VISUAL MAG.	SPECTRAL CLASS	N	HENRY DRAPER CAT. NO.	SAO* CAT. NO.	STAR PROP.	
			06	34	45.396	+16	26	37.40			+1.930	4U	IV	56386AB	79294	
251	24 GAM	GEM AL-JEHA	06	34	45.396	+16	26	37.40	+3.525	F0	IV	48329A	78682	D		
252	55 DEL	GEM WASAT	07	17	08.265	+22	04	34.08	+2.999	G8	IB					
253	27 EPS	GEM HEBSUTA	06	40	51.263	+25	10	56.52	+3.700	F7	IB	*				
254	43 ZET	GEM MEKBUDA	07	01	03.627	+20	38	43.45	+3.200	M3	III	429546	79031	DV		
255	7 ETA	GEM CALIX	06	11	51.158	+22	31	23.36	+3.200	M3	III	44478A	78135	DV		
256	13 MU	GEM NUCAIAI	06	19	56.036	+22	32	21.98	+2.930	M5	III	455424F*	73297	D		
257	18 NU	GEM AL-ZIRR	06	25	59.627	+20	14	44.06	+4.152	B7	IV E		78423	C		
258	31 XI	GEM AL-NATIK	06	42	29.966	+12	57	04.31	+3.353	F5	IV		96074			
259	15 ALP	GRU DENE3 AL-NA'R	06	22	05.486	-47	12	14.54	+1.743	B5	V		230992	C		
260	8 ET	GRU DENE3 AL-NA'R	06	22	39	-41.443	-47	08	48.20	+2.240	M3	III	*	214352		
261	1 GAM	GRU DENE3 AL-NA'R	06	21	50	54.450	-37	06	03.59	+3.550	B8	III		213374		
262	64 ALP-1	HER RASALGETHI (A)	07	12	21.948	+14	26	45.34	+3.134	S	M5		156014A	102680	D	
263	64 ALP-2	HER RASALGETHI (B)	07	12	22.274	+14	26	43.71	+5.477	S	G5	III+FB2	156015B	O		
264	27 BET	HER KORNEP-TOROS	06	15	28	04.05	+21	50.16	+2.783	G8	III		149556			
265	20 GAM	HER NASAK S-HAMIYA III	06	16	19	42.737	+15	16	05.32	+3.745	A3	III		147547A	102107	D
266	65 DEL	HER SARIN	07	12	53.555	+24	53	49.78	+3.140	A3	IV		156164A	84951	D	
267	7 KAP-1	HER MARSIC	06	16	05.589	+17	10	43.81	+5.550	S6	III		145001A	1C1951	C	
268	76 LAM	HER MASTY	07	17	29	42.347	+26	09	49.43	+4.400	K4	III		153339	85163	
269	24 CHE	HER CUJAM	06	16	23	06.263	+14	06	45.26	+4.550	AO	P		148112A	1C2153	D
270	33 A	HYA UKDAH III	09	32	02.913	-05	41	26.92	+5.550	SK1	III		82370	136964		
271	30 ALP	HYA AL-1RD	09	25	07.791	-08	26	27.47	+1.981	K3	III		81751	136871		
272	4 DEL	HYA MINAZAL I	09	35	00.534	+05	52	45.60	+4.143	AO	V		73262	116965	C	
273	11 EPS	HYA MINAZAL III	09	34	44	07.755	+06	36	12.41	L	III+FB2		746744EC	117112	C	
274	16 ZET	HYA MINAZAL V	03	52	45.092	+06	08	13.25	+3.366	GU	III		76294	117264		
275	7 ETA	HYA MINAZAL II	09	40	36.656	+02	34	45.66	+4.550	B3	V		74280	117050C		
276	35 TOI	HYA UKDAH IV	09	37	18.152	-00	54	53.79	+3.983	K3	III		83618	137035		
277	38 KAP	HYA AL-SHARASIF I	09	37	56.469	-14	06	16.63	+5.058	B5	V		83754	155386	D	
278	13 RHO	HYA MINAZAL IV	08	45	47.115	+06	C1	25.07	+4.347	A0	V		751374A3	717146	O	
279	5 SIG	HYA MINKHAL-JUJA	08	35	08.671	+03	31	05.98	+4.435	K2	III		73471	116988		
290	31 TAU-1	HYA UKDAH I	09	26	36.518	-02	32	56.04	+4.387	F6	V		81397A	136895		
281	32 TAU-2	HYA UKDAH II	09	29	25.587	-00	C5	57	+4.586	A3	III		82446	136932		
282	72 LEO	ZUBRA-I	11	12	32.937	+23	22	05.99	+4.625	M3	III		97778	81736		
283	32 ALP	REGULUS	10	05	42.647	+12	44.54	+1.1	35.351	B7	V		87501A	98967	D	
284	34 BET	LEO DEN3OL A	11	46	30.605	+14	51	05.80	+2.131	A3	V		102647A	99803	D	
285	41 GAM-1	LEO ALGIEBA (A)	10	17	12.120	+20	05	42.86	+2.282	S	K0	III	824844	81298	D	
286	41 GAM-2	LEO ALGIEBA (B)	10	17	13.401	+20	05	39.63	+3.473	S	G7	III	894858	81299	D	
287	68 DEL	LEO ZOSWA	11	11	27.935	+20	47	52.61	+2.562	A4	V		87603	81727		
288	17 EPS	LEO ALGENUBI	09	43	00.396	+24	00	19.62	+2.970	GO	II		84441	81004		
289	36 ZET	LEO AD-HAFERA	10	13	54.158	+02	40	01.94	+3.435	F0	III		89025	81265		
290	30 ETA	LEO AL-JABA-I	10	04	36.513	+17	00	26.17	+3.530	A0	IB		87737	98955	D	
291	7C THE	LEO CERIAN	11	11	37.166	+15	42	11.88	+3.343	A2	V		97673	99512		
292	1 KAP	LEO MINKRASAD	09	21	44.777	+25	23	55.32	+4.460	K2	III		811464A3	80807	D	
293	4 LAM	LEO ALTERF	09	28	52.238	+23	11	22.12	+4.310	K5	III		92308	80885		
294	24 MU	LEO RASALAS	09	49	55.134	+26	14	36.08	+3.390	K2	III		85503	81064		
295	14 OMI	LEO SUBRA	09	38	29.008	+16	07	14.64	+3.481	A2	F6	I	93968/54	98709	D	
296	OMI	LEO PRACCIPUA	10	50	31.231	+14	23	05.62	+3.308	K0	III-IV		94264	62297		
297	R	LEO CRIMSON STAR	04	57	19.727	-14	52	47.98	+6.0CC	C7	IV		31996	150058	V	
298	11 ALP	LEO ARNE3	05	30	31.339	-17	51	24.19	+2.581	FO	IB		36673A	150547	D	
299	3 BEI	LEO NI-AL	05	26	06.030	-20	47	52.90	+2.935	S5	V		36079AB	170457	C	
300	13 GAM	LEO KURSI AL JABBAR	05	42	22.653	-22	27	43.30	+3.597	F6	V		38393A	170759	D	

TABLE 3 CONTINUED  
STAR NAMES AND STAR DATA ORDERED BY STAR CONSTELLATION

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RI ASCEN. HR MIN SEC			DECLINATION DEG MIN SEC			P VISUAL V SPECTRAL CLASS			S HENRY DRAPER N			SAO * CAT. NO.	STAR PROP.	
			49	1C-193	-20 52 55.23	+3.78C	58	III	39 364	170926	170926	170926	170926	170926			
301	15 DEL	LEP	AR5-1 AL JAUZAH	05 49	1C-193	-20 52 55.23	+3.78C	58	III	39 364	170926	170926	170926	170926	170926		
302	8 ALP-1	LIS	ZUBENELEGESU I	14 47	54-959	-15 47 25.9	+5.153	F5	IV-V	1508198	1508198	1508198	1508198	1508198	0		
303	9 ALP-2	LIS	ZUBENELEGESU II	14 48	56-947	-15 50 06.5	+2.747	A3	V	1308414	1308414	1308414	1308414	1308414	0		
304	27 BET	LIS	ZUBENESCHAMAL I	15 14	48-732	-03 11 58.93	+2.612	88	V	135742	135742	135742	135742	135742			
305	44 ETA	LIB	ZUBAN AL KRAVI	15 41	15-348	-15 3C 53.7	+5.4CC	F0	III	140417	140417	140417	140417	140417			
306	21 NU	LIB	ZUBEN YAKRASI	15 03	49-323	-16 03 51.08	+5.280	K5	III	159466	159466	159466	159466	159466			
307	20 SIG	LIB	ZUBEN ACRABI	15 01	08-247	-25 05 12.27	+3.318	M4	III	159028	159028	159028	159028	159028			
308	16 LYN	DOLONES X	06 53	59-335	+4 5 09 40.72	+4.995	A2	V	163139	163139	163139	163139	163139				
309	31 LYN	SHAUKA-I	08 19	25-154	+4 3 21 0C.83	+4.245	K5	III	161463	161463	161463	161463	161463				
310	3 ALP	LVR	VEGA	18 35	14-655	+3 8 44 03.68	+0.044	A0	V	42319	42319	42319	42319	42319			
311	10 BET-1	LVR	S-ELIAK	18 48	13-915	+3 3 19 12.51	+3.4CC	B	PE	67174	67174	67174	67174	67174	D	DV	
312	14 GAM	LVR	SULAFAT	18 57	04-294	+3 2 37 11.26	+3.250	89	III	67451	67451	67451	67451	67451	D	DV	
313	4 EPS-1	LVR	DOUBLE I (B)	18 42	4C-665	+3 3 37 03.40	+6.0C1	S	A4	67663	67663	67663	67663	67663	D	DV	
314	4 EPS-2	LVR	DOUBLE I (A)	19 42	40-973	+3 9 37 00.09	+5.040	S	A2	67309	67309	67309	67309	67309	D	DV	
315	5 EPS-2	LVR	DOUBLE DOUBLE II	18 42	43-125	+3 9 33 37.93	+4.525	A3	*A5	67310	67310	67310	67310	67310	D	DV	
316	6 ZET-1	LVR	NASR ALWAKI I	19 43	02-939	+3 7 33 06.28	+4.347	A	M	1735828	1735828	1735828	1735828	1735828			
317	7 ZET-2	LVR	NASR ALWAKI II	18 43	04-779	+3 7 32 28.33	+5.73C	F0	IV	1736490	1736490	1736490	1736490	1736490	D	DV	
318	20 ETA	LVR	ALADFA'R	19 12	03-290	+3 9 03 32.03	+4.383	82	IV	160163A	160163A	160163A	160163A	160163A	D	DV	
319	2 MU	LVR	AT-4FAR	18 22	34-868	+3 9 28 43.35	+5.11C	A3	III	169702	169702	169702	169702	169702			
320	55 ALP	OPH	RAS4L-HAGUE	17 32	36-696	+1 2 35 41.92	+2.072	A5	III	159561	159561	159561	159561	159561			
321	60 BET	OPH	CEBALRAI	17 41	CC-641	+0 4 35 11.84	+2.771	K2	III	161056	161056	161056	161056	161056			
322	62 GAM	OPH	MULPHEN	17 45	23-019	+0 2 43 28.29	+3.739	A0	V	161968	161968	161968	161968	161968			
323	1 DEL	OPH	YED PRIGR	16 11	43-325	+0 3 34 01.41	+2.727	M1	III	146051	146051	146051	146051	146051			
324	2 EPS	OPH	YED POSTERIOR	16 15	40-448	-0 4 34 19.57	+3.233	G9	III	141086	141086	141086	141086	141086			
325	13 ZEI	OPH	SAIK	16 34	24-137	-10 28 02.81	+2.567	A5	III	14971	14971	14971	14971	14971			
326	35 ETA	OPH	SABIK	17 07	30-61	-15 39 52.83	L	+2.430	A2.5V	155125A	155125A	155125A	155125A	155125A	D	DV	
327	42 THE	OPH	GARAFSA	17 18	56-157	-24 57 05.20	+3.265	B2	IV	157056	157056	157056	157056	157056			
328	10 LAM	OPH	MARFIK	16 28	23-341	+0 2 05 31.06	C	+3.910	A1	V	149857AB	149857AB	149857AB	149857AB	149857AB	D	DV
329	40 XI	OPH	AGGIA	17 18	06-251	-0 1 03 35.72	F2	V	156874B	156874B	156874B	156874B	156874B	D	DV		
330	42 -C	ORI	MIZAN BATIL I	05 32	55-055	-0 4 52 10.72	L	+4.590	B2	III	185296	185296	185296	185296	185296		
331	49 -D	ORI	MIZAN BATIL III	05 36	21-136	-0 7 14 21.42	+4.757	A4	IV	3701943	3701943	3701943	3701943	3701943			
332	6 -G	ORI	MANICA	04 52	00-305	+1 1 20 45.39	+5.190	A3	V	37507	37507	37507	37507	37507			
333	56 ALP	ORI	BETELGEUSE	05 52	27-069	+0 7 23 57.92	+C-8CC	M2	IA3	31283	31283	31283	31283	31283			
334	19 BET	ORI	RIGEL	05 12	07-930	-0 8 15 28.65	+D.153	BB	V	113271	113271	113271	113271	113271	D	DV	
335	24 GAM	ORI	BELLATRIX	05 22	26-128	+0 6 18 21.71	+1.635	B2	III	35466	35466	35466	35466	35466			
336	34 DEL-1	ORI	MINIKA	05 29	27-017	-0 0 20 04.41	+2.200	*0.511	V	132320	132320	132320	132320	132320			
337	44 EPS	ORI	ALNITAK	05 33	4C-676	-0 1 13 56.3C	+1.694	B0	IV	370411A	370411A	370411A	370411A	370411A			
338	50 ZEI	ORI	ALNITAK	05 38	14-043	-0 1 58 02.98	+1.749	G9.518-B3	IV	37128	37128	37128	37128	37128			
339	28 ETA	ORI	SAIF AL JABBAR	05 21	57-616	-0 2 26 55.6	+3.35C	*0.51A	V	132444	132444	132444	132444	132444			
340	41 THE-1	ORI	TRAPEZUM	05 32	48-935	-0 5 25 16.22	N	+4.500	BB	06	+80.5	+80.5	+80.5	+80.5	+80.5		
341	43 THE-2	ORI	MIZAN BATIL II	05 32	55-449	-0 5 26 5C.72	+5.C17	09.5VP		37020-3ABC0	37020-3ABC0	37020-3ABC0	37020-3ABC0	37020-3ABC0			
342	44 IOT	ORI	AIYSA	05 32	59-226	-0 5 56 28.26	+2.761	09 III		312321	312321	312321	312321	312321			
343	53 KAP	ORI	SAIPH	05 45	23-013	-0 9 41 05.45	+2.0E4	30.5IA	V	112323	112323	112323	112323	112323			
344	39 LAM	ORI	MEISSA	05 32	22-913	+0 9 59 03.35	+3.391	08	+80.5V	3871	3871	3871	3871	3871			
345	4 OMICRON-1	ORI	AL KUMM I	04 49	42-058	+1 10 08.31	+4.72C	M3	S	30959	30959	30959	30959	30959			
346	9 OMI-2	ORI	AL KUMM II	04 53	33-423	+1 3 26 13.64	+4.073	K2	III	314214	314214	314214	314214	314214			
347	7 PI-1	ORI	AL TAJ IV	04 52	08-440	+1 0 04 22.63	+4.67C	A0	V	94201	94201	94201	94201	94201			
348	2 PI-2	ORI	AL TAJ I	04 47	53-047	+0 8 49 57.64	+4.355	A0	V	30739	30739	30739	30739	30739			
349	1 PI-3	ORI	TABIT	04 47	07-190	+0 6 52 32.26	+3.39C	F6	V	112124	112124	112124	112124	112124			
350	3 PI-4	ORI	AL TAJ II	04 48	32-421	+0 5 31 16.34	+3.692	B2	III	30836	30836	30836	30836	30836			

TABLE 3 CONTINUED  
STAR NAMES AND STAR DATA ORDERED BY STAR CONSTELLATION

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RT. ASCEN. HR MIN SEC			DEC MIN SEC DEG MIN SEC			VISUAL MAG. N	SPECTRAL CLASS N	HENRY DRAPER CAT. NO.	SAO* CAT. NO.	STAR PROP.
			04	51	38.661	00	21	37.24					
351	8 PI -5 ORI	AL TAJ III	04	51	38.661	00	21	37.24	+3.72C	*	31237	112197	
352	10 PI -6 ORI	AL TAJ V	04	55	57.250	+01	39	20.04	+4.459	K2	II	31237	112281
353	36 UPS	THABIT	05	29	36.607	-01	20	12.07	+4.616	80	V	31237	1132222
354	37 PHI -1 ORI	HEKA	05	32	04.419	+09	27	26.67	+4.410	80	IV	31237	112914
355	40 PHI -2 ORI	HIBA	05	34	09.415	+09	15	54.81	+4.092	K0	III	31237	112558
356	54 ALP	PEACOCK	20	21	42.289	-56	53	50.02	+1.920	83	IV	193524	2465574
357	53 ALP	PEG MARKAB	23	02	16.048	+1	45	56.02	+2.436	B9.5III	*	218045	10CB378
358	53 BET	PEG SCHEAT	23	01	20.720	+27	48	40.45	+2.560	*	M2	III-III	*
359	98 GAM	PEG ALGENIB	00	10	39.447	+14	59	20.52	+2.827	B2	IV	886	91781
360	8 EPS	PEG ENIF	21	41	43.256	+09	39	41.69	+2.397	K2	IV	205178A	127029
361	42 ZEI	PEG HOMAM	22	39	57.996	-10	34	11.39	+3.35C	B8	V	214323A	10CB103
362	44 ETA	PEG MAJAR	22	40	39.264	+26	57	33.42	+2.943	G2	III-III	*	2151924
363	26 THE	PEG BI-JAM	22	07	4C.600	+05	57	04.13	+3.515	A2	V	210499	12739C
364	47 LAM	PEG SADALNAZI	22	44	07.173	+23	18	07.41	+3.955	G8	III-III	*	215665
365	48 MU	PEG SADALBARI	22	47	35.191	+24	20	13.72	+3.99C	G8	III	216131	90816
366	22 NU	PEG FUM AL FARAS	02	20	09.492	+04	48	49.17	+4.940	K4	III	209147	127285
367	46 XI	PEG SUUDALNUJUM	22	44	11.592	+11	54	57.24	+4.2C3	F7	V	2015648A	10CB165
368	43 OMI	PEG SADALHATAR	22	39	24.327	+29	02	46.12	+4.907	A1	V	214994	90734
369	62 TAU	PEG SALM	23	18	03.5C5	+22	27	52.22	+4.58C	A5	IV	220061	91186
370	68 UPS	PEG ALKARAB	23	22	52.739	+23	07	43.20	+4.414	F8	IV	220557	91253
371	-H	MISAM AL THURAYYA II	02	15	42.013	+56	56	22.44	+6.645	B2	IV	14143A	23182
372	33 ALP	MIRFAK	03	20	44.441	+49	41	06.04	+1.903	F5	IV	20302	38787
373	26 BET	PER ALSOL	C3	04	54.356	+0C	45	52.46	+2.2CC	*	V	19356A	38591
374	44 ZEI	PER ATIK	03	50	58.359	+31	44	12.55	+4.58C	A5	IV	220061	91186
375	15 Eta	PER MIRAM	C2	47	01.935	+55	41	22.43	+3.761	K3	IV	217506A	23655
376	27 KAP	PER MISAM	03	06	06.756	+44	40	10.21	+3.793	K0	III	19476A	38609
377	46 XI	PER MENKIB	03	55	42.625	+25	36	56.50	+4.017	B5	V	24912	56856
378	38 OMI	PER ALATIK	03	41	10.598	+32	07	53.47	L	+3.329	B1	III	23180A8
379	22 PI	PER GORGONEA SECUNDA	C2	50	33.275	+19	27	50.67	+4.637	B1	V	18411	56647
380	25 RHO	PER GORGONEA TERTIA	03	01	57.735	+39	38	52.86	+3.200	M4	III-III	*	19059
381	7 CHI	PER MISAM AL THURAYYA I	02	14	32.316	+52	17	05.57	+5.99C	G5	IV	133394	23149
382	28 OME	PER GORGONEA QUARTA	03	08	03.167	+39	25	23.33	+4.613	K0	III	19656	56224
383	ALP P-E	ANKAA	00	23	49.029	-02	34	38.55	+2.39C	B1	III	2261	215093
384	857 P-IC	ALRIAL III	01	03	51.357	-46	59	09.17	+3.500	S8	III	65543	215365
385	GAM	PHE ALRESCIA	C1	26	11.776	-43	34	25.94	+3.400	K5	II	9053	2155616
386	KAP	ALRIAL V	00	23	44.306	-43	57	25.67	+3.329	A7	VN	2262	215092
387	63 DEL	PHE ALRIAL II	C0	39	58.531	-46	21	33.1U	+4.583	G8	III	3919	215194
388	NU	P-IC ALRIAL IV	01	12	55.906	-45	47	53.12	+4.353	F9	V	7570	215428
389	86 ZEI-1	PSC KUTON III	C5	09	41.462	-44	59	53.25	+6.05C	MU	V	3393	217223
390	113 ALP	PSC KUTON II	C1	59	27.392	+02	31	23.04	+3.92C	A	M+A2 P	12446/7AB	110291
391	4 BET	PSC KUTON I	C3	01	19.667	+03	33	01.75	+4.518	B5	V	217891	127934
392	63 DEL	PSC KUTON I	00	46	05.113	+07	19	47.93	+4.430	K5	III	109474	4656
393	86 ZEI-1	PSC KUTON III	01	11	06.533	+07	18	41.34	+5.235	FD	IV-V	1344A	10C9739
394	86 ZEI-2	PSC KUTON III	01	11	08.346	+07	19	52.03	+6.270	F6	V	7345BC	109740
395	110 OMI	PSC TORCULAR	01	42	44.568	+08	54	24.64	+4.258	S8	III	1061	11011C
396	24 ALP	FOMAL-JAUT	22	54	53.531	-29	53	15.79	+1.153	A3	V	216356	191524
397	17 BET	FUM AL-HUT I	22	48	4C.C70	-32	36	11.06	+4.325	S40	V	213398A	213884
398	P-IC	FUM AL-HUT II	22	28	40.353	-32	36	41.52	+7.759	S	V	213884	213884
399	-K-1 PUP	MERKEB (A)	07	36	46.820	-26	41	12.59	+4.5C9	S8	V	61555A	174198
400	-K-2 PUP	MERKEB (B)	07	36	46.820	-26	41	19.88	+4.623	S3	V	61556BC	174199

TABLE 3 CONTINUED  
STAR NAMES AND STAR DATA ORDERED BY STAR CONSTELLATION

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RI-ASCEN. HR MIN SEC			DECLINATION DEG MIN SEC			P	VISUAL MAG.	SPECTRAL CLASS	S-N	HENRY DRAPER (-D) CAT. NO.	SAO CAT. NO.	STAR PROP.	
			08	01	49-552	-39	51	45-83								
401	ZET	PUF	NACS	07	47	11-421	-24	43	59-22	+3-347	G3	I8	66911	198752		
402	7 XI	PUP	AZMIDISKE	19	37	51-612	+17	53	51-21	+4-358	SC	I1	63700A8	174601	D	
403	5 ALP	SGE	SHAM	19	55	54-576	-26	19	57-29	+4-930	565	I1	185758A	1C512C	D	
404	60 A	SGR	TEREBELLUM III	19	53	52-815	-27	18	14-61	+4-52C	GK3	III	189005	188778		
405	59 -B	SGR	TEREBELLUM II	19	53	53-183	-27	51	01-64	+4-501	M4	III	198603	188742		
406	62 -C	SGR	TEREBELLUM IV	19	20	25-992	-40	42	43-10	+3-36C	B9	III	191965	188844		
407	ALP	SGR	RUKBAT	19	19	02-816	-4	33	17-72	+4-01C	88	V-N	181454A	229646	D	
408	BET-1	SSR	ARKAB PRIOR	19	19	36-611	-4	53	44-93	+4-28C	FO	III N	181523	229654		
409	BET-2	SSR	ARKAB POSTERIOR	19	18	35-678	-30	25	35-22	+2-99D	KU	III	165135	209696		
410	10 G4H	SGR	ALNASL	18	17	47-554	-29	51	04-68	+2-685	K2	III	168454A	186681	D	
411	19 DEL	SGR	KAUS MEDIA	19	20	51-188	-34	24	36-94	+1-935	IV	IV	169022A	210091	D	
412	20 EPS	SGR	KAUS AUSTRALIS	18	59	25-892	-29	51	12-79	+2-66C	A2	III	176674E	18760C	D	
413	38 ZET	SGR	ASCELLA	18	19	14-573	-36	46	43-43	+3-113	M3	II	167618AB	209957	D	
414	ETA	SGR	NAMALAROID	18	24	53-655	-25	27	04-13	+2-83C	K2	III	168684A	186681		
415	22 LAM	SGR	NAUS BOREALIS	18	19	46-324	-21	04	25-46	+3-36D	*	IA P	* 166337A3	186697	D	
416	13 MU	SGR	ALNAM	18	51	03-664	-22	49	25-54	+4-92C	CK2	III	174974AB	187426	D	
417	32 NU -1	SGR	AIN AL RAMI I	19	52	05-766	-22	44	08-19	+4-930	K3	III	175190	187445	D	
418	35 NU -2	SGR	AIN AL RAMI II	19	06	47-450	-21	06	17-49	L	+2-934	F2	II-III	176524ABC	187756	C
419	41 PI	SGR	AL BALDA	18	52	03-921	-26	21	38-23	+2-063	B2	V	169916	187444		
420	34 SIG	SGR	NUNKI	19	C3	49-160	-27	44	43-4	+3-315	K1	III	177116	187683		
421	40 TAU	SGR	NAHALSAGIRAH II	18	42	31-862	-27	02	38-48	+3-177	88	III	173300	187239	D	
422	27 PHI	SGR	NAHALSADIRAH I	19	22	14-512	-24	36	26-63	+5-02C	DAS	II	182369AB	188101	D	
423	47 CHI-1	SGR	NAHALSAGIRAH III	19	22	23-169	-24	03	43-16	+5-420	K4	III	182416	188105	D	
424	49 CHI-2	SGR	NAHALSADIRAH IV	19	12	28-542	-25	20	4C-52	+4-95C	DF5	II	176950AB	187862	D	
425	92 PSI	SGR	AL KILADCA	19	52	46-44	-26	26	01-67	+4-700	DGS	II	189376	188722		
426	58 OME	SGR	TEREBELLUM I	16	26	2C-2C6	-26	13	21-95	C	+1-0BC	*	MA IB	184415	C	
427	21 ALP	SCO	ANTARES	17	44	05-000	-40	06	34-95	+1-022	F2	IA	* 184847B/5AB	184415	C	
428	8 BET-1	SCO	GRAFFIAS (AB)	16	02	31-507	-1	40	12-45	+2-628	SC2	V	144217AB	159682	D	
429	8 BET-2	SCO	GRAFFIAS (C)	16	02	31-857	-19	4C	0C-07	+4-92C	B2	V	144218C	159683	D	
430	7 DEL	SCO	DSCHUBBA	15	57	22-318	-22	23	51-37	+2-300	80	V	143275	184014		
431	THE	SCO	SARGAS	17	33	43-371	-42	58	05-15	+1-86C	FO	IB	155532	229201		
432	10T-1	SCO	GIRTAB	16	48	56-539	-57	56	03-7	+3-56C	B2	IV	161471A	2288420	D	
433	10T-2	SCO	JANANT	17	46	41-111	-40	04	35-03	+4-8CC	CA3	IV	161312A	228846	D	
434	KAP	SCO	MUL	17	39	01-548	-33	00	22-76	+2-410	B2	IV	160578	209163		
435	35 LAM	SCO	SHAULA	17	30	12-626	-27	04	05-63	+1-617	B1	V	158926	228954		
436	MU -1	SCO	TALI AL SHAULAH I	16	48	28-579	-37	57	48-92	+3-140	*	91-SV	* 151890	208102		
437	MU -2	SCO	TALI AL SHAULAH II	16	48	56-539	-27	56	03-7	+3-56C	B2	IV	151385	228116		
438	NU -1	SCO	JABBAH (B)	16	09	03-949	-13	19	17-45	L	+6-263	AO	IV	145501CJ	159763	D
439	NU -2	SCO	JABBAH (A)	16	C9	05-91	-13	19	56-20	L	+4-C12	B2	V	145502AB	159764	D
440	XI -1	SCO	GRASSIAS (A)	16	D1	36-889	-11	14	12-28	L	+4-160	FS	IV	144069/DAB	159665	D
441	XI -2	SCO	GRASSIAS (B)	16	C1	37-312	-11	14	08-07	+7-3CC	OG7	C	159666	184081		
442	6 PI	SCO	NUR	15	55	43-301	-25	53	18-14	+2-397	81	V	143018AC	183987	D	
443	5 RHO	SCO	TCLIL	15	53	47-507	-29	04	1C-42	+3-883	B2	V	142665A	183957	D	
444	20 SIG	SCO	ALNIYAH I	16	18	03-667	-25	23	28-14	+2-992	81	III	147165A	184336	D	
445	23 TAU	SCO	ALNIYAH II	16	32	45-906	-28	06	5C-56	+2-832	BD	V	145438	184481		
446	34 UPS	SCO	LESATI	17	27	21-612	-37	15	28-57	+2-700	B3	V	158408	208896		
447	9 OME-1	SCO	JABHAH ACRABI I	16	C3	52-659	-30	32	01-11	+3-36C	B1	V	144147C	184123		
448	10 OME-2	SCO	JABHAH ACRABI II	16	04	28-091	-20	44	06-53	+4-320	SG2	V	144608	184135		
449	24 ALP	SCP	UNUKAL-HAI	15	41	48-151	+46	34	53-93	+2-646	K2	III	140573A	121157	C	
450	28 BET	SCP	NASAK SHAMIYA I	15	43	52-610	+15	34	37-42	+3-672	A2	IV	141030A	101725	D	

TABLE 3 CONTINUED  
STAR NAMES AND STAR DATA ORDERED BY STAR CONSTELLATION

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RT. ASCEN. HR MIN SEC	DECLINATION DEG MIN SEC	P VISUAL MAG.	N SPECTRAL CLASS	S HENRY DRAPER CAT. NO.		SAO* CAT. NO.	STAR PROP.
							F 6	V		
451	41 GAM	SCP NASAK STAMIYA I	15 54 CB+155	+15 49 24.77	+3.841		142860		1C1826	
452	13 DEL-1	SCP NASAK YAMANI I (A)	15 32 26.633	+10 42 12.66	+4.109	S	138917B		101623	D
453	13 DEL-2	SCP NASAK YAMANI I (A)	15 32 24.691	+10 42 17.82	+4.178	S	138918A		101624	D
454	37 EPS	SCP NASAK YAMANI II	15 48 19.243	+04 37 36.85	+3.708	A	141795		121218	
455	63 THE-1	SCA ALYA (A)	18 53 43.976	+08 13.25	+4.622	A5	175638A		124056	D
456	63 THE-2	SCA ALYA (B)	18 53 45.420	+08 07.70	+4.975	A5	175633B		124070	D
457	16 TAU	CALAENO	03 41 49.528	+24 08 01.54	+5.455	B7	2326		76126	
458	17 TAU	ELECRA	03 41 59.055	+23 57 27.82	+3.702	B6	23302		76131	
459	20 TAU	MAIA	03 42 50.756	+24 12 47.01	+3.978	B7	23408		76155	
460	21 TAU	STEROPE I	03 42 55.370	+24 24 00.00	+5.757	B8	23432		76159	
461	22 TAU	STEROPE II	03 43 03.846	+24 22 24.38	+6.33C	B9	23441		76164	
462	23 TAU	MEROPHE	03 43 21.195	+23 47 38.39	+4.176	B6	23490		76172	
463	28 BU	PLEIONE	03 46 12.951	+22 59 07.36	+5.474	B8	23862		76229	
464	27 -F	TAU ATLAS	03 46 11.030	+23 54 01.66	+3.526	B8	2385043		76228	D
465	19 -G	TAU TAYGEIA	03 42 13.512	+24 18 42.31	+4.258	B6	23338		7614C	
466	87 ALP	TAU ALDEBARAN	04 33 02.896	+16 24 37.51	+0.953	K5	291394B		94027	D
467	112 BET	TAU ELNATH	05 23 07.710	+28 34 01.74	+1.652	B7	35497		77166	
468	54 GAM	TAU HYADUM I	04 16 56.651	+15 30 30.62	+3.635	KC	27371		93868	
469	61 DEL	TAU HYADUM II	04 20 02.494	+17 25 36.81	+3.757	KC	27657		93897	
470	74 EPS	TAU OCULUS BOREUS	04 25 41.585	+19 04 16.36	+3.534	KU	29305		93954	
471	25 ETA	TAU ALCYONE	03 44 30.424	+23 57 02.57	+2.87C	B7	236304		76199	D
472	77 THE-1	TAU HYADUM III	04 25 42.992	+15 51 10.15	+3.942	KC	28307		93955	
473	78 THE-2	TAU HYADUM IV	04 25 49.220	+15 45 41.80	+3.4L9	A7	28315		93957	
474	65 KAP-1	TAU ALKALBAIN III	04 22 23.093	+22 10 51.94	+4.220	A7	27934		76601	
475	67 KAP-2	TAU ALKALBAIN IV	04 26 0.12	+22 05 13.99	+5.52C	A7	27946		76602	
476	69 UPS	TAU ALKALBAIN V	04 23 18.590	+22 42 06.75	+4.298	FO	29404		76608	D
477	52 PHI	TAU ALKALBAIN I	C4 17 16.426	+27 13 58.38	+4.95C	K1	273824		76558	D
478	59 CHI	TAU ALKALBAIN II	04 19 32.079	+25 30 46.87	+5.39C	B9.5V	276324		76573	D
479	2 ALP	IRI CAPUT TRIANGULI	01 50 13.410	+22 20 1C.14	+3.413	F6	11443		74996	
480	4 BET	IRI MIZAN	02 06 33.573	+34 05 06.52	+2.917	A5	13161		55306	
481	ALP	IRI AIRIA	16 43 21.159	-58 56 19.89	+1.935	K4	15075		253700	
482	UMA	FLYING STAR	11 50 06.169	+36 04 33.16	+6.453	38	103095		62738	
483	2 A	UMA ALTIIBA I	08 30 08.926	+65 19 03.83	+5.465	A	72037		1459C	
484	24 -D	UMA ALTIIBA II	01 50 13.410	+22 20 1C.14	+3.413	F6	11443		6897	
485	19 -E	UMA ALHAUD III	03 10 05.839	+70 03 06.47	+4.52	S2	75439		27191	
486	15 -F	UMA ALHAUD I	03 12 36.226	+54 13 41.19	+4.818	A5	79209		27136	
487	80 -G	UMA ALCCR	09 05 21.116	+51 49 20.27	+4.467	A	106591		116842	28751
488	23 -H	UMA ALHAUD IV	13 23 13.477	+55 14 52.99	+4.CC3	A5	819374		14908	D
489	50 ALP	UMA DUBBE	09 27 36.65	+63 16 55.11	+3.656	F0	956894E		15384	D
490	48 BET	UMA MERAK	11 00 39.510	+62 01 16.80	+1.752	KO	103287		27876	
491	64 GAM	UMA PHECCA	10 58 50.251	+56 39 03.12	+2.377	A1	103287		21879	
492	69 CEL	UMA MEGREZ	11 51 12.566	+53 59 21.98	+2.433	A0	106591		44752	
493	77 EPS	UMA ALICIA	12 12 57.594	+57 13 36.95	+3.310	A3	112185		28315	
494	73 ZET-1	UMA MIZAR (A)	13 21 54.316	+58 13 51.4	+1.75C	A0	1166564		28553	
495	79 ZET-2	UMA MIZAR (B)	13 21 55.288	+55 14 03.46	+2.27C	A2	116657B		28737	D
496	85 ETA	UMA ALKAID	13 45 34.294	+49 33 41.13	+3.95C	A2	120315		4752	
497	25 THE	UMA ALHAUD V	09 29 31.498	+51 54 23.18	+1.930	83	82328AB		27289	D
498	9 IOT	UMA TALITTA	08 55 41.626	+48 14 31.77	+3.177	F6	77327AB		42630	D
499	12 KAP	UMA KAFZAIANIA	C9 00 13.266	+47 21 20.73	+3.572	A7	83021		42661	D
500	33 LAM	UMA TANIA BCREALIS	10 14 03.153	+43 03 53.54	+3.455	A2	43268			

TABLE 3 CONTINUE C  
STAR NAMES AND STAR DATA ORDERED BY STAR CONSTELLATION

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RT. ASCEN. HR MIN SEC	DECLINATION DEG MIN SEC	P VISUAL MAG.	V SPECTRAL CLASS	S HENRY DRAPER (4D) CAT. NO.	SAO* CAT. NO.	STAR PROP.	
501	39 MU	UMA TANIA ASTRALIS	10 19 21.468	+41 45 06.25	+3.0.33C	M0	III	8575t	4331C	
502	54 NU	UMA ALULA BOREALIS	11 15 46.947	+33 22 02.56	+3.465	K3	III	982624B	62486	
503	53 XI	UMA ALULA ASTRALIS	11 15 31.162	+31 48 38.89	C	+3.803	Y	98230/1AB	62484	
504	1 OMI	UMA MUSCIDA	09 26 07.631	+60 53 14.56	+3.347	G5	III	71369A	14573	
505	3 PI -1	UMA ALTIIBA II	08 34 46.703	+65 11 44.92	+5.625	G0	Y	72905	14605	
506	4 PI -2	UMA ALTIIBA III	08 35 51.356	+64 30 16.92	+4.533	K2	III	73108	14616	
507	8 RHO	UMA ALTIIBA IV	08 58 03.773	+57 49 35.21	+4.757	M3	IIIIB	76827	14742	
508	11 SIG -1	UMA ALTIIBA V	09 04 01.893	+67 04 33.26	+5.147	K7	IV-V	77800	14769	
509	13 SIG -2	UMA ALTIIBA VI	09 06 01.131	+67 20 21.67	C	+4.79E	F7	78154AB	14788	
510	14 TAU	UMA ALTAUD I	09 06 49.121	+63 43 07.22	+4.668	A7	M	79362/3A	14796	
511	29 UPS	UMA ALTAUD VI	09 47 27.112	+59 16 30.31	+3.754	F2	IV	849394B	27401	
512	30 PHI	UMA ALTAUD VII	09 48 43.042	+54 17 56.53	L	+4.573	A3	852354B	27408	
513	63 CHI	UMA ALKAFZAH	11 43 25.030	+48 03 24.16	+3.703	K0	III	102224	43886	
514	1 ALP	UMI POLARIS	01 49 48.786	+83 01 43.74	+2.50Q	* F8	IV	*	8330A	
515	7 BET	UMI KOC-JAB	14 50 49.645	+74 21 35.58	+2.0.73	K4	III	131873	8102	
516	11 GAM -1	UMI PHERKAID MINOR	15 17 07.110	+72 00 13.08	+5.0.0	K4	III	136726	8207	
517	13 GAM -2	UMI PHERKAID MAJOR	15 20 47.147	+72 00 42.57	+3.0.4	A3	II-III	137422	822C	
518	23 DEL	UMI YILDUN	17 49 18.333	+86 36 34.79	+4.347	A1	V	166205	2937	
519	22 EPS	UMI CIRCIORES	16 51 00.905	+92 07 21.54	+4.28C	* G5	III	*	153751A	
520	16 ZET	UMI AKFA FARKADAIN	15 45 47.812	+77 56 57.09	+4.303	A3	V	142105	83328	
521	21 Eta	ANNA FARKADAIN	16 18 56.288	+75 52 1E.64	+4.937	DAB	V	148048	8470	
522	13 GAM -2	VEL REGOR	08 07 59.465	-47 11 18.31	+1.333	07	+WC7	682734	219504	
523	KAP	VEL MARKEB	C9 20 33.853	-54 47 30	+2.493	B2	IV	8118B	236891	
524	LAM	VEL SU-HAIL	09 06 03.310	-43 13 47.60	+2.240	K5	IV	796474B	220878	
525	67 ALP	VIR SPICA	13 22 33.361	-1C 54 03.36	+C.968	B1	V	11665B	157923	
526	5 BET	VIR ZAVIJAVA	11 48 05.397	+02 02 47.61	+3.608	F8	V	10297D	119076	
527	29 GAM	VIR PCRRIMA	12 39 07.452	-C1 10 31.58	C	+2.745	FD	V	110379/04B	138917
528	43 DEL	VIR MINELAUV	12 53 04.985	+03 40 07.60	+J.369	M3	III	112300	113674	
529	47 EPS	VIR VINDEMIAIRIX	12 59 41.210	+11 13 38.90	+2.828	G9	III	113226	1C0384	
530	79 ZET	VIR EZEZ	13 32 09.554	-00 20 27.51	+1.363	A3	V N	119098	139420	
531	15 Eta	ZANIAH	12 17 20.761	+23 23 26.55	+3.0.6C	A2	V	107259	138721	
532	99 IOT	VIR SYRMA	14 13 23.345	-05 45 46.18	+4.077	F7	III-IV	124950	139824	
533	98 KAP	VIR ALGAFA'R I	14 10 13.451	-1C 02 3C.80	+4.083	K3	III	124294	158427	
534	100 LAM	VIR KAMBALIA	14 16 23.963	-13 D9 30.89	+4.522	A8	M	125337	158489	
535	107 MU	VIR RIGILAWWA	14 40 25.283	-02 26 3C.92	+3.663	F3	IV	129502	14009C	
536	105 PHI	VIR ALGAFA'R II	14 25 32.362	-02 33 44.90	+4.293	G2	III	1268694B	139951	
537	6 ALP	ANSER	13 26 37.410	+24 33 44.90	+4.42C	M0	III	183438	87261	

TABLE 4  
STAR NAMES AND STAR DATA ORDERED BY STAR NAME

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RT. ASCEN. HR MIN SEC			DECLINATION DEG MIN SEC			P	VISUAL MAG.	SPECTRAL CLASS	HENRY DRAPER (H.D.) CAT. NO.	SAO* CAT. NO.	STAR PROP.		
			02	56	21.882	-40	30	15.15								
235	THE-1 ERI	ACAMAR (A)	02	56	22.518	-40	30	14.34	+4.263	S	A2	*	186224 18622B	216113 216114	D	
236	THE-2 ERI	ACAMAR (B)	02	56	22.517	-40	30	14.34	+4.490	S	B5	*	10144	232481	D	
229	ALP ERI	ACERNAR	01	35	51.307	-57	29	24.93	+1.312	S	B1	IV	108248A	251904	D	
181	ALP-1 CRU	ACRUX (A)	12	23	48.664	-62	49	15.43	+1.932	S	B3	IV	109229B	520954B	D	
192	ALP-2 CRU	ACRUX (B)	12	23	48.695	-62	43	22.28	B	+4.228	A	H	762567	58267	D	
78	65 ALP	ACUBENS	08	55	45.247	+12	03	09.07	+5.060	K0	III	159366	175256	D		
203	27 -F	DRA ALDIB I	17	32	09.513	+68	10	01.20	+4.800	F5	V	*	160922	157576	O	
226	28 OME	DRA ALDIB II	17	37	14.348	+68	46	52.48	+4.800	F5	V	*	89025	81265	D	
289	36 ZET	LEO AD-JAFERA	10	13	54.756	+23	40	01.94	+3.455	F0	III	520954B	172616	D		
97	26 EPS	CMA AD-HARA	06	56	39.591	-28	54	10.24	+1.55C	B2	II	*	1801834	68010C	D	
6	46 XI AND	ADHIL	01	19	23.103	+45	16	02.87	+4.967	K0	III-IV	*	18207	37155	O	
329	40 XI OPH	AGGIA	17	18	00.251	-21	03	35.72	+4.337	F2	V	*	1568974B	185296	O	
417	32 NU -I SGR	AIN AL RAMI I	18	51	09.064	-22	49	29.54	+4.920	CK2	V	*	174314A	187426	O	
418	35 NU -2 SGR	AIN AL RAMI II	18	52	05.066	-22	46	06.15	+4.95C	K3	III	*	17519C	187445	O	
520	16 ZET	UMI AKFA FARKADAIN	15	45	47.812	+77	56	57.09	+4.303	A3	V	*	162105	8328	D	
318	20 ETA	LVR ALAU FAR	19	12	03.290	+39	03	32.09	+4.383	B2	IV	*	1801834	192901AB	D	
133	1 KAP	CEP AL AG-NAM I	20	10	36.574	+77	33	42.36	+4.310	89	III	*	9665	10629	D	
137	33 PI	CEP AL AG-NAM II	23	06	18.677	+75	07	01.35	+4.4C7	62	III	*	218658AB	170153	D	
223	44 CHI	DRA AL-JAKAN	18	21	57.980	+72	42	42.15	+3.563	F7	V	*	171364	9087	D	
46	7 EPS	AUR ALANZ	04	59	22.530	+43	45	05.56	+2.970	F0	IA	*	23180AB	35955	D	
378	38 OMI	PER ALATIK	03	41	10.539	+32	07	53.47	L	+3.929	B1	III	*	178524BC	56673	D
419	41 PI	SGR AL BALDAH	19	06	47.950	-21	06	17.99	L	+2.854	F2	III-III	*	187756	144810	D
11	2 EPS	AQR ALBALI	20	49	59.211	-03	40	48.21	+3.720	A1	V	*	198001	18912/5A	O	
187	6 BEI-1 CYG	ALBIREO (A)	19	28	42.222	+27	51	12.44	+3.68C	K5	II+B	*	183914B	8701	D	
188	6 BEI-2 CYG	ALBIREO (B)	19	28	44.102	+27	51	32.63	+5.11C	38	V	*	87302	87302	D	
16	6 MU	AQR ALBULAN I	20	49	57.974	-19	10	15.76	+4.723	AB	H	*	198743	1441895	D	
17	13 NU	AQR ALBULAN II	21	06	52.805	-14	34	31.13	+4.507	G8	III	*	154182	201381	D	
92	42 PI	ARI AL BUTAIN I	02	46	29.855	+17	15	21.06	+5.34C	B6	IV	*	17543A	93127	D	
43	46 RHO	ARI AL BUTAIN II	02	53	36.913	+17	49	30.02	+5.500	* DFS	V	*	18256	93195	D	
39	48 EPS	ARI AL BUTAIN III	02	56	20.825	+21	08	29.91	L	+4.618	A2	V	*	18519	75673	D
40	58 ZET	ARI AL BUTAIN IV	03	12	01.326	+20	51	31.93	+4.837	A0	IV-V	*	20150	75810	D	
174	1 ALP	CRV AL-CHIBA	12	05	49.746	-24	27	01.13	+4.3C3	F2	V	*	105452	1700001B	D	
487	80 -G	UMA ALCOR	13	23	13.477	+55	14	52.39	+4.003	A5	V	*	116842	28751	D	
471	25 ETA	TAU ALCYCNE	03	44	30.424	+23	57	01.57	+2.87C	B7	III	*	23630A	76199	D	
168	15 GAM	TAU AL DAFIRAH	12	29	26.870	+28	32	46.07	+4.353	K1	III-IV	*	108381	82313	D	
466	87 ALP	TAU ALDEBARAN	04	33	62.896	+16	24	37.51	+6.858	K5	III	*	20139AB	94027	D	
128	5 ALP	CEP ALDERAMIN	21	17	23.181	+62	22	23.74	+2.439	A7	IV-V	*	203280A	19302	D	
222	43 PHI	DRA AL-CHIBA	18	21	28.525	+71	18	42.23	L	+4.21C	AO	P	*	126868AB	1700001B	D
169	17 ALP	CRA ALFECCA MERIDIANA	19	06	04.345	-37	59	03.49	+4.10C	A2	N	*	179253	210990	D	
129	8 BEI	CEP AL FIRK	12	28	01.326	+70	20	27.65	+3.18C	B2	II	*	20521A-B	10057	D	
533	98 KAP	VIR ALGAFAFAR I	14	10	13.451	-10	02	30.80	+4.183	K3	III	*	124294	158427	D	
536	105 PHI	VIR ALGAFAFAR II	14	25	37.362	-02	00	17.26	+4.738	G2	III	*	126868AB	139351	D	
359	88 GAM	PEG ALGENIB	00	10	33.497	+14	54	20.57	+2.927	B2	IV	*	886	91781	D	
288	17 EPS	LEO ALGENIBI	09	43	00.996	+24	00	15.62	+2.97C	SO	V	*	84441	81004	D	
285	41 GAM-1	LEO ALGIEBA (A)	10	17	13.120	+05	42.86	+2.289	S	KO	III	*	89484A	81298	D	
286	41 GAM-2	LEO ALGIEBA (B)	10	17	13.4C1	+20	05	39.69	+3.479	S	G7	III	*	8948B	81299	D
373	26 BET	PER ALGOL	03	04	54.356	+40	45	52.46	+2.200	*	88	V	*	13356A	38591	D
177	7 DEL	CRY ALGORAB	12	27	16.36C	-16	14	14.14	+2.343	B9	V	*	10876A	157223	D	
486	15 -F	UMA AL-JAUD I	09	05	21.316	+51	48	28.27	+4.467	A	H	*	78209	27136	D	
510	19 TAU	UMA AL-JAUD II	09	06	49.121	+63	43	01.22	+4.668	A7	H	*	78362/3A	14796	D	

TABLE 4 CONTINUED

## STAR NAMES AND STAR DATA ORDERED BY STAR NAME

STAR NUMBER	STAR DESIGNATION	STAR PROPER NAME	RT. ASCEN. HR MIN SEC			DECLINATION DEG MIN SEC			VISUAL MAG.	SPECTRAL CLASS	S HENRY DRAPER N (HD) CAT. NO.	SAO* CAT. NO.	STAR PROP.
			0	9	12	0	22	26					
485	18 -E	UMA ALHAUD III	09 12 36.226	*54	13 47.19	+4 48.9	45	V	79433	27191			
488	23 -H	UMA ALHAUD IV	09 27 36.565	*63	16 55.01	+3 56.56	819374	F0	14908				
497	25 THE	UMA ALHAUD V	09 29 31.489	*51	54 23.18	+3 56.1	823248	F6	27289				
511	29 UPS	UMA ALHAUD VI	09 47 27.162	*59	16 36.31	+3 75.4	849994B	F2	27401				
512	30 PHI	UMA ALHAUD VII	09 48 43.042	*54	17 56.59 L	+4 57.3	95235AB	A3	27408	D			
514	24 GEM	GEM ALGENA	C6 34 49.396	*16	26 37.40	+1 33C	47105	AC	959112				
251	11 MU	AUR AL-TIBA I	C6 10 00.157	*18	25 38.27	+4 56.0	33641	A	57755				
52	15 LAN	AUR AL-TIBA II	C6 15 37.211	*40	03 24.51	+4 57.1	34411A	M	40233	C			
53	21 SIG	AUR AL-TIBA III	05 21 15.060	*37	20 26.65	+4 58.7	35186	K4	57981	D			
493	77 EPS	UMA ALIOITH	12 51 50.084	*56	13 51.14	+1 79C	AO	P	112185	28553			
290	30 ETA	AL JABHA	10 04 36.533	*17	00 26.17	+3 53D	AU	IB	87737	98955			
191	53 EPS	CYG AL JANAH	20 44 11.168	*13	46 55.15	+2 45.1	191985A	K6	70474	C			
150	65 XI -1	CET AL KAFF AL JID-HAY I	02 10 20.747	*09	36 47.36	+4 35D	13611	K8	110408				
151	73 XI -2	CET AL KAFF AL JID-HAY II	02 15 29.791	*08	14 13.15	+4 27.1	15311	B9	110543				
142	82 DEL	CET AL KAFF AL JID-HAY III	02 36 54.985	*00	06 50.00	+4 06.6	16582	110665					
149	87 MU	CET AL KAFF AL JID-HAY IV	04 42 14.102	*05	54 15.02	+4 26C	FO	IV	17034	11C723			
513	63 CHI	UMA ALKAFFA	11 43 25.030	*48	03 24.16	+3 70.3	KD	III	10224	43886			
996	85 ETA	UMA ALKAITO	13 45 34.294	*95	33 44.13	+1 86C	B3	V	120315	44752			
477	52 PHI	TAU ALKALBAIN I	04 17 16.436	*27	13 59.39	+4 55U	K1	III	273824	76558	D		
478	59 CHI	TAU ALKALBAIN II	04 19 32.079	*22	30 46.87	+5 35C	89.5V		276384	76573	C		
474	65 KAP-1	TAU ALKALBAIN III	04 22 23.093	*22	10 51.94	+4 28C	27934	A7	V	76601			
975	67 KAP-2	TAU ALKALBAIN IV	04 22 26.032	*22	05 13.95	+5 28C	27946	V		76602			
976	69 UPS	TAU ALKALBAIN V	04 23 19.680	*22	42 06.75	+4 29B	FO	III-IV	28024	76608	C		
75	51 MU -1	BOO ALKALUR CPS	15 22 35.995	*31	33 05.45	+4 33C	FO	V	137351A	64686			
370	68 UPS	PEG ALKARAB	23 22 52.793	*23	07 43.20	+4 414	F9	IV	220657	91253			
179	71 ALP	CRY ALKES	10 57 25.139	*18	01 55.62	+4 66.6	K0	III	95272	156375			
132	2 THE	CEP AL KIOR	20 28 44.679	*62	49 32.32	+4 207	A	M	195725	18897	D		
425	42 FSI	SSR AL KILADAY	19 12 28.542	*25	20 4C.58 L	+4 95C	DF5		1799504B	187882			
395	4 OMI-1	ORI AL KUMM I	04 53 42.059	*14	10 09.31	+4 720	M3	S	30959	94176			
346	9 CMI-2	AL KUMM II	04 53 32.423	*13	26 13.64	+4 67.3	K2	III	314214	94218	D		
5	57 GAM-1	AL KUMM II	02 00 49.177	*02	05 27.01	+2 17.9	S	K3	125334	37734	C		
92	41 EPS	CNC ALMALF	C8 37 35.668	*15	43 23.07	+6 3CC	A6	III	7331	98024			
122	30 MU	CAS AL MARFAK	01 04 55.636	*34	40 32.36	+5 16.3	6582	V P	22024				
23	30 DEL	AQL ALMIZAN I	19 22 58.597	*03	00 48.98	+3 356	FU	IV	182640	124603			
26	55 ETA	AQL ALMIZAN II	19 49 55.525	*00	52 33.03	+3 50D	F6	13	187929	125159	V		
27	65 THE	AQL ALMIZAN III	20 03 43.493	*00	58 16.06	+3 245	B9.5III		191692	14415C			
13	57 MU	SGR ALNAM	18 10 46.324	*21	04 25.46	+3 350	*	BB	166937AB	186497	D		
416	10 GAM	SGR ALNASL	19 C2 35.678	*20	25 35.80	+2 39C	K0	III	165135	2C9696			
146	45 THE	CET AL NAMHAI I	01 21 31.363	*08	26 27.16	+3 60.3	KD	III	85124	129274	D		
156	52 TAU	CET AL NAMHAI II	C1 91 44.660	*16	12 0C.5C	+3 496	G8	V P	10701	147986			
157	59 UPS	CET AL NAMHAI III	01 57 33.311	*21	19 03.71	+3 39D	M1	III	12274	167471			
259	46 EPS	GRU AL NATOR	22 C5 45.486	*47	12 14.54	+1 74.7	85	V	209952A	230992	C		
337	46 EPS	ORI ALNATH	05 33 40.475	*01	13 56.30	+1 694	80	IA	37128	132346			
339	50 ZEI	ORI ALNITHA	C5 38 14.443	*11	58 02.98	+1 74.9	09.5IB+83		37742/343	132444	C		
158	17 PHI-1	CET ALNITHAM I	00 41 40.021	*10	52 53.49	+4 750	K0	III	4188	147423			
159	19 PHI-2	CET ALNITHAM II	00 47 37.288	*10	54 47.65	+5 189	F8	V	4913	14747C			
160	22 PHI-3	CET ALNITHAM III	00 53 31.022	*11	32 13.03	+5 300	K4	III	5437	147519			
161	23 PHI-4	CET ALNITHAM IV	CC 56 13.563	*11	38 58.40	+5 79C	*	G37	5722	147546			
444	20 SIG	SCO ALNIYAT I	16 18 08.667	*25	28 28.14	+2 992	91	III	147165A	184336	D		
445	23 TAU	SCO ALNIYAT II	16 32 45.9C6	*28	06 5C.56	+2 832	80	V	145438	184481			

TABLE 4 CONTINUED

## STAR NAMES AND STAR DATA ORDERED BY STAR NAME

NUMBER	STAR DESIGNATION	STAR NAME	PROPER NAME	RI. ASCEN. HR MIN SEC			DECLINATION DEG MIN SEC			VISUAL MAG.	SPECTRAL CLASS	S HENRY DRAPER NO.	SAO* CAT. NO.	CAT. NO.	STAR PROP.
				0	9	25	0	7	791						
271	30 ALP	47A	ALPHARD	00 05 47.941	+28	49	52.12	+26	52	54.75	+2.23C	A0 V	139006	63893	
172	5 ALP	CRB	ALPHCECCA	00 05 47.941	+28	49	52.12	+26	52	54.75	+2.23C	B9 III P	139006	73765	D
3	21 ALP	AND	ALPERIAZ	01 17 04.173	+37	357	54.32	07	55	L	+2.074	F5	154905/EAB	30239	
213	21 MU	DRA	ALRAKIS	01 59 27.392	+02	31	23.04	+4.92C	+3.92D	A	+4.92C	124467/A8	110291	D	
390	113 ALP	PSC	ALRESCHA	00 23 44.956	-43	57	25.67	+3.92E	+3.92F	A	+3.92E	2262	215092		
386	MAP	PHE	ALRIAL I	00 38 58.031	-46	21	33.10	+3.92F	+3.92G	A7 V N	+3.92F	3919	215194		
397	MU	PHE	ALRIAL II	01 03 51.357	-46	59	05.78	+3.92G	+3.92H	G8 III	+3.92G	6555AE	215365	D	
384	BET	PHE	ALRIAL III	01 12 55.906	-45	47	53.12	+3.92H	+3.92I	F8 V	+3.92H	7570	215428		
388	NU	PHE	ALRIAL IV	01 26 11.776	-43	39	25.94	+3.92I	+3.92J	K5 II	+3.92I	9053	215516		
385	GAM	PHE	ALRIAL V	17 42 56.440	+53	49	19.34	+5.730	+5.731	A0 F7	+5.730	*	161633	30538	
202	DRA	ALRUBAH		22 26 15.513	-00	16	36.08	+4.323	+4.324	F2 IV	+4.323	213052B	146108	D	
113	55 ZEI-2	AGR	ALSAC (A)	11 09 11.261	-00	16	35.27	+4.323	+4.324	F2 IV	+4.323	213052B	146107	D	
112	55 ZEI-1	AGR	ALSAC (B)	13 32 27.595	+63	34	34.11	+4.323	+4.324	F2 IV	+4.323	185144	18396		
219	61 SIG	DRA	ALSAFI	20 44 20.236	+15	56	34.82	+4.270	+4.271	K0 V	+4.270	1979644	106476	D	
199	12 GAM-2	DEL	AL SALIB (A)	20 44 19.473	+15	56	34.82	+4.270	+4.271	K2 IV	+4.270	1979638	126475	D	
198	12 GAM-1	DEL	AL SALIB (B)	19 52 51.383	+06	16	49.84	+3.714	+3.714	F7 V	+3.714	198512	125235	D	
21	60 BET	AQL	ALSHAIN	09 37 54.469	-14	06	16.63	+5.58	+5.58	G8 IV	+5.58	83754	155388		
277	38 MAP	57A	AL SHARASIF I	11 09 11.730	-22	33	08.93	+4.467	+4.467	F2 IV	+4.467	97277	179624		
190	11 BEI	CRT	AL SHARASIF II	20 17 53.485	-12	55	04.49	+4.467	+4.467	A2 III-IV	+4.467	1934324	163468	D	
111	8 NU	CAP	AL SHAT	19 49 20.599	+04	44	05.71	+0.753	+0.753	B9 V	+0.753	187642	125122	D	
207	53 DEL	GRA	ALTAIR	19 12 32.924	+67	34	25.03	+3.667	+3.667	A0 V	+3.667	180711	18222	D	
348	2 PI -2	ORI	AL TAJ I	04 47 53.047	+08	48	57.64	+4.355	+4.355	A0 V	+4.355	30739	112124		
350	3 PI -4	ORI	AL TAJ II	04 48 32.421	+05	31	16.34	+3.667	+3.667	B2 III	+3.667	308356	112124		
351	8 PI -5	ORI	AL TAJ III	04 51 33.661	+02	21	37.24	+4.753	+4.753	B3 III	+4.753	31237	112197		
357	7 PI -1	CRI	AL TAJ IV	04 52 36.661	+10	04	22.53	+4.671	+4.671	A0 V	+4.671	31255	94201	D	
352	10 PI -6	ORI	AL TAJ V	04 55 57.260	+01	39	20.04	+4.459	+4.459	K2 II	+4.459	31767	112281	D	
379	17 BET	CNC	AL TARF	08 13 49.282	+09	20	27.13	+3.523	+3.523	K4 III	+3.523	65267	116569	D	
293	4 LAM	LEO	ALTERF	09 28 52.248	+23	11	22.21	+4.310	+4.310	K5 III	+4.310	82303	80885		
29	16 LAM	AGL	AL THALIMAIN I	19 03 35.689	-04	51	32.14	+3.430	+3.430	B8 V	+3.430	171756	143021	D	
28	91 IOT	AGL	AL THALIMAIN II	19 34 08.066	-01	23	55.89	+4.360	+4.360	B5 V	+4.360	1894930	143597	D	
983	2 A	UMA	AL THABA I	08 30 08.936	+65	19	03.83	+5.465	+5.465	A H	+5.465	21037	14590		
505	3 PI -1	UMA	AL THABA II	08 34 46.703	+65	11	44.92	+5.625	+5.625	GD V	+5.625	72905	14609		
506	4 PI -2	UMA	AL THABA III	08 35 51.956	+64	30	16.82	+5.625	+5.625	K2 III	+5.625	73108	14616		
507	8 RHO	UMA	AL THABA IV	08 58 03.973	+67	43	35.21	+4.757	+4.757	M3 III	+4.757	768927	147472		
508	11 SIG-1	UMA	AL THABA V	09 04 01.898	+07	04	33.26	+5.147	+5.147	K5 III	+5.147	77800	14769		
509	13 SIG-2	UMA	AL THABA VI	09 06 01.131	+67	20	21.67	C	+4.959	F7 IV-V	+4.959	79154AB	14788	D	
484	24 -0	UMA	AL THABA VII	09 30 05.838	+70	03	06.47	+4.552	+4.552	G2 IV	+4.552	82210	16897		
240	8 RHO-1	ERI	ALUDRI I	02 59 52.365	-07	51	31.98	+5.745	+5.745	D6 V	+5.745	18784	130243		
241	9 RHO-2	ERI	ALUDRI II	03 00 14.892	-07	52	51.43	+5.310	+5.310	S66	+5.310	18953AB	62484	D	
242	10 RHO-3	ERI	ALUDRI III	03 01 49.952	-07	47	43.01	+5.257	+5.257	A M	+5.257	19107	130269	D	
99	31 ETA	CMA	ALUDRA	07 22 06.972	-29	12	16.04	+2.44C	+2.44C	B5 V	+2.44C	58350	173651		
200	11 DEL	DEL	AL UKUD	20 41 07.413	+14	53	38.69	+4.420	+4.420	A7 III P	+4.420	197461	106425		
503	53 XI	UKA	ALUA AUSTRALIS	11 15 31.162	+31	48	38.88	C	+3.88	G0 V	+3.88	98230/1AB	62484		
502	54 NU	UMA	ALULA BOREALIS	11 15 46.947	+33	22	02.56	+3.465	+3.465	K3 III	+3.465	99262AB	62486	D	
215	25 NU -2	DRA	ALWAID (A)	17 31 16.719	+45	12	22.82	+4.877	+4.877	A M	+4.877	15956CA	30450	D	
214	24 NU -1	DRA	ALWAID (B)	17 31 11.293	+55	13	04.07	+4.380	+4.380	A M	+4.380	159541B	30447	D	
455	63 THE-1	SCA	ALYA (A)	18 53 43.976	+04	08	13.25	+4.622	+4.622	A5 V	+4.622	175639A	124070	D	
456	63 THE-2	SCA	ALYA (B)	18 53 45.420	+04	08	07.70	+4.975	+4.975	A5 V	+4.975	175639B	124070	D	
102	24 OMI-2	CMA	AL ZARA	07 CO 56.142	-23	45	32.46	+3.82C	+3.82C	B3 IA	+3.82C	53138	172839		

TABLE 4 CONTINUED

## STAR NAMES AND STAR DATA ORDERED BY STAR NAME

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RT. ASCEN.			DECLINATION			VISUAL MAG.	SPECTRAL CLASS	HENRY DRAPER NO.	SAO* CAT. NO.	STAR PROP.
			HR	MIN	SEC	DEG	MIN	SEC					
258	31 XI	GEM AL ZIRR	06	42	28.966	+12	57	04	.31	F5	IV	49737	96074
14	43 THE	AGR ANCHA	22	14	11.766	-02	01	56.75	+4.155	G8	III-IV	211391	145991
243	2 TAU-2	ERI ANGETENAR	02	48	46.150	-21	12	32.91	+4.763	K0	III	17824A	168094 D
383	6 ALP	PHE ANKA	00	23	49.129	-42	54	38.5	+4.320	K0	III	2261	215093
537	11 ALP	VUL ANSER	19	26	37.410	+24	33	44.90	+4.420	H0	III	183439	87261
427	21 ALP	SCO ANTARES	16	26	20.206	-26	19	21.95	C	H1	IB	146418 SAB	184415 C
521	21 ETA	UMI ANVA FARKADAIN	16	18	56.298	+7	52	16.64	+4.937	D4B	II	148048	8470
64	16 ALP	BOO ARCTURUS	14	13	22.750	+19	26	30.95	-C-05C	K2	III	124897	1C0944
409	409 BEY-2	SGR ARKAB POSTERIOR	19	19	35.611	-44	53	44.93	+4.290	F0	III	N	181623
908	11 BET-1	SGR ARKAB PRIOR	19	19	02.816	-44	33	17.72	+4.010	B8	V N	181454A	229654 D
298	11 ALP	LEP ARNEB	05	30	31.594	-17	51	24.18	+2.591	F0	IB	36673A	150547 D
301	15 DEL	LEP ARSH AL JAUZAH	05	49	16.193	-20	52	55.23	+3.78C	S8	III	35364	170926
413	38 ZET	SGR ASCELLA	18	59	49.932	+23	57	12.79	L	A2	III	176687AB	187600 D
81	47 DEL	CNC ASCELLUS AUSTRALIS	08	41	50.747	+19	20	21.83	+3.935	K0	III	74442	98087 C
80	93 GAM	CNC ASCELLUS BOREALIS	09	40	23.702	+21	38	59.82	+4.670	K0	III	74442	80378
115	101 IOT	CAR ASPIDISKE	09	15	45.109	-53	03	53.70	+2.248	F0	IB	80404	236808
221	52 UPS	DRA AT-4AF1 I	19	55	00.917	+7	13	50.82	+4.910	K0	III	176524	9283
220	60 TAU	DRA AT-HAF1 II	19	16	31.472	+33	15	47.87	+4.455	K3	III	161984	9366
319	2 MU	Lyr AT-4FAR	18	22	34.963	+39	28	43.95	+5.110	A3	III	169702	243984B
374	94 ZEI	PER ATIK	03	50	58.959	+31	44	12.55	+2.85C	B1	IB	56799	D
464	27 -F	TAU ATLAS	03	46	11.030	+23	54	07.66	+3.526	B8	III	23950AB	76228 D
861	402 ALP	TRA AURIA	16	43	21.059	-68	56	15.85	+1.935	K4	III	150798	18320 AB
77	43 PSI	800 AULAD ALNAT-ALAT	15	02	18.039	+27	09	29.75	+4.523	K2	III	133582	253700
74	19 LAM	800 AULAD ALTHIBA	14	14	28.969	+46	19	01.94	+4.178	A0	P	125162	44965
114	1 EPS	CAR AVIOR	08	21	23.393	-53	20	52.38	+1.980	K0	II+3	71129/0	235932
194	80 PI -1	CVG AZELFAGE	21	40	18.952	+50	57	35.10	+4.665	B3	IV	208672	33665
234	3 ETA	ERI AZHA	02	53	58.952	-03	05	45.89	+3.987	K1	III-IV	18320	130197
402	7 XI	PUP AZMIDIKE	07	47	11.421	-24	43	59.22	+3.347	G3	IB	61700AB	174601 D
30	33 ARI BARANI I	02	37	45.345	+26	50	50.75	+5.295	A3	V	16628A	75510 D	
31	35 ARI BARANI II	02	40	30.651	+22	29	44.29	+4.65C	B3	V	16908	75532	
32	39 ARI BARANI III	02	44	55.469	+23	02	26.66	+4.513	K1	III	17361	75778	
184	55 ZEI	CEI BATEN KAITOS	01	48	53.447	-10	34	52.90	+3.723	K2	III	11353	148059
126	426 ZET	CEN BATEN MENTAURUS	13	52	24.510	-47	02	34.87	+2.540	B2	IV	121263	226538
247	91 UPS-4	ERI BEEMIM I	04	16	00.636	-33	55	05.65	L	B8	.5V	21316AB	199902 D
246	43 UPS-3	ERI BEEMIM II	04	22	04.949	-34	07	54.81	+3.553	M1	III	28028	194484
284	50 UPS-1	ERI BEEMIM III	04	31	32.818	-29	51	55.49	+4.55C	S6	III	25085	169570 N
238	38 QMI-1	ERI BEID	04	09	25.339	-06	57	59.74	+4.045	F2	II	26574	131019
335	29 GAM	ORI BELLATRIX	05	22	26.878	+06	18	21.71	+1.635	B2	III	35468	112740
333	58 ALP	ORI BETELGEUSE	05	52	27.809	+07	23	57.92	+0.900	M2	IB	39801A	113271 DV
363	26 THE	PIHAM BIHAM	22	07	40.650	+05	57	04.13	+3.515	A2	V	210493	121340
171	7 CRB	BLAZE STAR	15	57	24.505	+26	03	39.04	+2.000	PEC	*	143454	84129
38	57 DEL	OTEIN CALAENO	03	C8	45.985	+18	32	20.22	+4.350	K2	III	19767	93328
457	16 TAU	CALX	03	41	49.528	+24	08	01.54	+5.455	B7	IV	23289	76126
256	13 MU	CANOPUS	06	19	56.096	+22	32	27.98	+2.89C	H3	III	44408A	45348
112	112 ALP	CAPILLA	06	22	50.493	-52	40	03.45	+0.720	FO	IA	234490	40486 D
44	13 ALP	CAPPELLA	05	12	59.466	+45	56	56.04	+6.062	G8	III+F	31029AF	21133 D
117	11 BET	CAP-1	00	29	735	+53	52	26.77	+2.275	F2	IV	432AB	1143
479	2 ALP	CAPUT TRIANGULI	01	50	13.447	+29	20	1C.14	+3.413	F6	IV	1143	74996
249	66 ALP	CASTOR	07	31	24.654	+31	59	59.07	C	A	M-A1 V	60198	
321	60 BET	CEBALRANI	17	41	CC.C41	+04	35	11.84	+2.771	K2	III	161096	122671

TABLE 4 CONTINUED  
STAR NAMES AND STAR DATA ORDERED BY STAR NAME

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RI. ASCEN. HR MIN SEC			DECLINATION DEG MIN SEC			VISUAL MAG. N	SPECTRAL CLASS	S HENRY DRAPPER N (HD) CAT. NO.	SAO* CAT. NO.	STAR PROP.	
			15	36	01.742	+40	30	55.00						
76	54 PHI	B00 CEGINUS	12	31	22.289	+41	37	49.10	+9.266	A2 V	97633	99512		
92	8 BET	CVN CHARA	11	11	37.066	+15	42	11.38	+3.343	G5 III	153751A	2770		
291	70 THE LEO	CHEPTAN	16	51	00.905	+82	07	21.54	+4.28C	* P	112413A	63257		
519	22 EPS	UMI CIRCITORES	12	53	41.478	+38	35	16.82	+2.992	F0 V	112412B	63256		
91	12 ALP-2	CVN COR CAROLI (A)	12	53	90.203	+38	35	03.82	+5.61C	F0 V	112412B	63256		
90	12 ALP-1	CVN COR CAROLI (B)	04	57	19.727	-14	52	97.48	+6.00C	C7 V	31956	150058	V	
297	R LEP	CRIAMON STAR	16	23	06.363	+14	08	45.24	+6.59C	AO P	148112A	102153	O	
269	28 OME	HER CUIAM	05	05	23.365	-05	08	58.54	+2.775	A3 III	33111	131794		
230	67 BET	ERI CURSA	20	18	12.200	-14	56	26.57	+3.073	F8 V+AO	193495/E	163481		
108	9 BET-2	CAP DABII MAJOR	20	17	58.071	-14	56	38.31	+6.16D	* B9	193452AB	163471	O	
107	BET-1	CAP DABII MINOR	20	39	43.539	+05	06	03.12	+1.248	A2 IA	197345A	49941		
186	50 ALP	CYG DENEB	21	44	16.992	-16	21	19.42	+2.930	* A M	207098A	164644	O	
110	49 DEL	CAP DENEB AL GEDI	01	06	04.420	-10	26	46.57	+3.437	K3 III	6805	147632		
145	31 ETA	CET DENEB ALGENUBI	22	39	41.443	-47	08	48.20	+2.240	* M3 II	214952	231258		
260	260 BET	GRU DENEB ALNAHR	20	30	49.400	+01	07	55.83	+4.035	B6 III	195810	106230		
201	2 EPS	DEL DENEB DULFIM	21	50	54.450	-37	36	03.59	+3.000	B8 III	207971	213374		
261	6 GAM	GRU DENEB HUT	00	41	04.911	-18	15	38.78	+2.028	K1 III	4128	14742C		
140	16 BET	CET DENEB KAITOS	19	03	06.647	+13	47	15.86	+2.399	B9 V	177724	104461	O	
25	17 ZET	AGL DENEB OKAB	11	46	30.605	+14	51	05.80	+2.131	A3 V	102647A	99809	O	
284	94 BET	LEG DENEB AL LEG	18	57	21.118	+14	53	56.41	+4.020	K2 III	17641	104318		
29	13 EPS	AGL DENEB AL OKAB	17	08	38.146	+65	46	33.99	+3.177	B6 III	155763	17365		
209	22 ZET	DRA DIBIA-I	16	23	19.476	-61	37	37.10	+2.730	G8 III	1493974B	17074	O	
210	14 ETA	DRA DIBAIN	13	07	33.321	+17	47	36.25	L F5 V	114378/2AB	1040443	O		
167	42 ALP	COM DIACEM	06	21	02.890	+49	19	56.91	+4.318	MQ IAB	44537	41076		
59	46 PSI-1	AUR DOLONES I	06	35	20.296	+32	56	51.00	+5.25C	* BB III	4710	59319		
56	52 PSI-3	AUR DOLONES II	06	35	45.703	+42	32	06.13	+4.786	K3 III	47174	41239		
55	50 PSI-2	AUR DOLONES III	06	39	26.746	+44	34	25.11	+5.627	K5 III	47914	41286		
57	55 PSI-4	AUR DOLONES IV	06	43	08.205	+43	37	45.74	+5.240	GO V	4869	41330	J	
58	56 PSI-5	AUR DOLONES V	06	43	50.996	+48	50	40.75	+5.21C	K1 III	48791	41346		
59	57 PSI-6	AUR DOLONES VI	06	47	13.920	+41	50	32.27	+5.005	K3 III	49520	41380		
60	58 PSI-7	AUR DOLONES VII	06	50	31.472	+38	34	05.87	+6.24E	* B9 P	50204	59589		
61	61 PSI-8	AUR DOLONES VIII	06	52	50.493	+46	20	23.28	+5.730	BB0 V	50659	41446		
62	62 PSI-9	AUR DOLONES IX	06	53	58.325	+45	03	40.72	+4.895	A2 V	50973	41463		
308	16 LYN	DOLONES X	18	42	43.325	+19	33	33.98	L	+4.895	KO III	173607/BCD	67315	O
315	5 EPS-2	LYR DOUBLE II	18	42	43.325	+19	33	33.98	L	+4.895	A3 +AS	173582B	6731C	O
314	4 EPS-1	LYR DOUBLE DOUBLE I (A)	18	42	4C.873	+35	37	0C.09	+5.04C	S A2	173583A	2952C	O	
313	4 EPS-1	LYR DOUBLE DOUBLE I (B)	18	42	40.865	+39	37	03.40	+6.003	S A4	173583A	184014	O	
430	7 DEL	SCO DSC4UBBA	15	57	22.513	+22	29	51.37	+2.3LC	BB0 V	143275	184014		
499	50 ALP	UMA DUBAE	11	00	39.570	+62	01	16.80	+1.793	KO III	1556894B	15384	O	
224	31 PSI-1	DRA ELTANIN	17	42	49.282	+02	10	26.21	+4.594	K5 III	162003A	889C	O	
225	31 PSI-2	DRA DZIBAN II	17	42	50.929	+12	10	55.38	+5.305	F9 V	162004B	8891	O	
211	12 IOI	DRA ERKIS	15	23	48.741	+53	08	26.16	+3.22E	K2 III	13775	2952C	O	
458	17 TAU	ELECTRA	03	41	50.055	+23	57	27.82	+3.7D2	BB III	23302	184014		
467	112 BET	ELNATH	05	23	07.710	+18	34	01.74	+1.652	B7 III	35497	77168		
206	33 GAM	DRA ELTANIN	17	55	26.576	+51	29	38.53	+2.231	K5 III	164058AB	30653	O	
360	8 EPS	PEG ENIF	21	41	43.756	+03	38	41.69	+2.397	K2 IB	206778A	127029	O	
134	1 MU	CEP ERKIS	21	41	50.840	+53	33	00.65	+3.90	H2 IA	2069364B	33693	OV	
130	35 GAM	CEP ERRAI	23	37	16.533	+71	21	11.73	+3.22C	K1 IV	222464	10818		
193	1 KAP	CYG FAHARIS I	19	15	56.796	+53	16	31.89	+3.773	KD III	181276	31537		
190	18 DEL	CYG FAHARIS II	19	43	24.671	+04	00	28.23	+2.81C	BB III	1868826B	48796	O	

TABLE 4 CONTINUED

## STAR NAMES AND STAR DATA ORDERED BY STAR NAME

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RT. ASCEN. HR MIN SEC	DECLINATION DEG MIN SEC	P VISUAL MAG.	V SPECTRAL CLASS	S HENRY DRAPER CAT. NO.	SAO* CAT. NO.	STAR PROP.	
192	64 ZET	CYG FAHARIS III	21 10 48.357	+30 01 15.51	+3.192	G8 II	202109	71070		
482	24 ALP	UMA FLYING STAR	11 50 06.169	+38 04 39.16	+6.452	G8 V P	103095	62738		
396	22 NU	FOMAL-HAUT	22 54 15.531	-29 53 15.79	+1.153	A3 V	216935	131524		
366	17 BET	PEG AL FARAS	22 C3 09.442	+04 48 46.17	+4.84C	K4 III	209447	127285		
397	4 BEI	PSA FUM AL HUT I	22 28 40.070	-32 36 11.09	+4.925	S AO V	213394	213883	0	
398	4 BEI	PSA FUM AL HUT II	22 28 40.358	-32 36 41.57	+7.759	S	213394	213884	0	
391	1 ZET	PSC FUM AL SAHAKAH	23 01 13.867	+03 33 01.75	+4.518	B5 V E	217991	127934		
38	1 GAM	CMA FURUD	06 18 21.506	-10 02 23.66	+3.024	B2.5V	44462	136698		
184	42 THE	CRU GACRUX	12 29 22.727	-56 50 00.33	+1.660	M3 II	1089034	240019	0	
327	22 LAM	OP-4 GARAFSA	17 18 56.157	-24 57 05.20	+3.865	B2 IV	157056	183320		
212	4 CRV	DRA GIAUSAR	11 28 27.546	+69 36 26.09	+3.327	M0 III	100029	15532		
176	4 GAM	GIEAH	12 13 13.443	-17 15 51.84	+2.569	B8 III	106625	157716		
432	101-1 SCO	GRV GIRTA8	17 44 05.100	-40 06 34.95	+3.029	F2 II	161414	228420	0	
104	3 BEI	CMA GOMEISA	07 24 26.157	+08 23 25.89	+2.854	B8 V	58715	115456		
382	28 OME	PER GORGONEA QUARTA	03 08 03.167	+39 25 23.39	+4.513	K0 III	19656	56224		
379	22 PI	PER GORGONEA SECUNDA	02 55 33.775	+39 27 50.67	+4.657	A2 V	18411	56047		
380	25 RHO	PER GORGONEA TERTIA	03 01 57.795	+38 38 52.86	+3.200	* M4 III-III *	19086	56138		
428	8 BEI-1 SCC	GRAFFIAS (AB)	16 C2 31.507	-19 40 12.45	+2.628	B0.5V	149217A8	139682	0	
429	8 BEI-2 SCO	GRAFFIAS (C)	16 02 31.857	-19 40 00.07	+4.920	B2 V	14428C	159683	0	
440	XI -1 SCO	GRASSIAS (A)	16 C1 36.089	-11 14 12.28	L	+4.16C	144009/0AB	159665	0	
441	XI -2 SCO	GRASSIAS (B)	16 01 31.342	-11 14 08.07	+7.30	037	153666	153666	0	
216	32 XI	DRA GRUMIUM	17 52 39.700	+56 52 47.68	+3.17	K2 III	161598	122451		
124	12 BET	CEN HADAR	14 00 16.510	-60 07 59.09	+0.610	81 III	30631	252582		
47	8 ZET	AUR HAEDUS I	04 58 58.680	+01 00 17.19	L	+3.8CC *	32068/3	33966		
48	10 ETIA	AUR HAEDUS II	05 03 08.214	+4 10 08.38	+3.171	V	32630	40026		
34	13 ALP	ARI HAMAL	C2 04 20.317	+22 13 37.07	+2.009	K2 III	12925	75151		
342	44 IOT	ORI HATYSA	05 32 53.126	-05 56 23.26	+2.61	0.9	37041A3	132323	0	
354	37 PHI-1 ORI	HEKA	05 32 04.419	+05 27 26.67	+4.91C	BD IV	36822	112914		
530	79 ZET VIR	HEZE	13 32 08.554	-01 20 27.51	+3.63	A3 V N	118093	139420		
355	40 PHI-2 ORI	HIMA	05 34 08.415	+05 15 54.81	+4.682	KD III	37160	11258		
361	42 ZET PEG	HOMAH	22 38 57.996	+10 34 11.39	+3.930	B8 V	214923A	108103	0	
468	54 GAM	TAU HYADUM I	C4 16 56.651	+15 30.62	+3.615	K0 III	27371	93868		
469	61 DEL	TAU HYADUM II	04 20 02.844	+17 25 16.91	+3.157	K0 III	27697	93897		
472	77 THE-2 TAU	HYADUM III	04 25 42.882	+15 51 10.15	+3.848	K0 III	28307	93955		
473	78 THE-2 TAU	HYADUM IV	04 25 48.220	+15 45 41.80	+3.009	A7 III	33957	183957		
943	5 RHO	SCC ICIL	15 53 47.507	-29 04 1C.42	+3.863	B2 V	142665A	152123		
474	42 ZET	PSO ISIR	06 53 43.103	-13 58 38.75	+4.990	G5 +A2	51220/1A3	8350C	0	
68	36 EPS	BOC IZAR	14 42 48.117	+27 17 02.66	+2.373	A2 V KO II	129388/348	144501D		
439	NU -2 SCO	JABBA-I (A)	16 09 05.091	-13 19 56.20	L	+4.012	1455024B	158764	0	
438	NU -1 SCO	JABBA-I (B)	16 09 03.509	-19 19 17.45	L	+6.263	A0 IV	142665A	184123	
447	9 OME-1 SCO	JABBAI ACRABI I	16 03 52.659	-20 32 07.11	+3.368	B2 V	14441C	144608		
448	10 OME-2 SCO	JABBAI ACRABI II	16 C4 28.511	-20 44 06.53	+4.32C	GG2	184135	19019	0	
131	3 ETA	CEP KABALFIRD	20 49 16.498	+61 33 38.86	+3.922	K0 IV	198193A	19019		
50	3 IOI	AUR KABALINAN	04 53 43.312	+03 05 15.54	+2.652	K3 II	31398	57522		
141	86 GAM	CET KAFAL GIOMA	02 40 42.337	+03 01 34.05	+3.559	A2 V	16970AB	110707		
499	12 KAP	UMA KAFZATANIA	09 00 13.166	+47 21 20.79	L	+3.572	77321AB	42661		
139	29 RHO	CEP KALBALRAI	22 29 27.435	+78 34 03.36	+5.520	A2	21399	10402		
534	100 LAM	VIR KAMBALIA	14 16 23.969	-13 08 30.89	+4.512	AB M	125337	158489		
383	20 EPS	PIC KAPTEYN'S STAR	05 03 41.452	-44 53 25	+8.350	M0 V	33393	217223		
412	SGR	KAUS AUSTRALIS	16 20 51.189	-34 24 3E.94	+1.815	B2 IV	165022A	210091	C	

TABLE 4 CONTINUED

## STAR NAMES AND STAR DATA ORDERED BY STAR NAME

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RT. ASCEN. HR MIN SEC			DECINN. DEG MIN SEC			VISUAL MAG.	SPECTRAL CLASS	HENRY DRAPER CAT. NO.	SAO* CAT.-NO.	STAR PROP.
			18	24	53.059	-25	27	04.13			K2	III	
915	22 LAM	SGR KAUS BOREALIS	19	17	47.554	-29	51	04.68	+2.695	K2	III	168454A	186681
911	19 DEL	SGR KAUS MEDIA	04	12	58.161	-07	43	45.8	+4.433	K1	V	269654	131063
239	40 OMI-2	ERI KEID	12	28	3C.810	+24	50	35.38	+5.455	A3	P	108945	82346
166	21 UU	CIM KISSIN	21	13	19.440	+05	02	24.35	+3.314	G0	III+45	202447/8	126662
227	8 ALP	EQU KITALP-4	14	50	49.645	+74	21	35.58	+2.673	K4	III	131873	8102
515	7 BET	UMI KOCHAB	02	39	32.493	+19	47	59.6	+5.650	A0	IV-V	93062	D
41	34 MU	ARI KOLEON	16	28	24.41C5	+21	35	5C.16	+2.783	G8	III	149856	84411
264	27 BET	HER KORNEPHCROS	12	31	45.342	-23	07	13.60	+2.666	G5	III	109379	180915
475	9 BEI	CRV KRAZ	22	02	2C.440	+64	23	01.68	+4.454	A	H	2097914	19827
136	17 XI -2	CEP KURTAH (A)	22	02	19.143	+64	23	03.30	+6.354	A	M	2097908	19826
135	17 XI -1	CEP KURTAH (3)	05	42	22.653	-22	27	48.30	+2.557	F6	V	383934	170759
300	13 GAM	LEP KURSI AL JABBAR	04	59	00.753	-07	19	44.93	+4.735	S8	III	32249	131700
249	65 PSI	ERI KURSI AL JAOUZAH II	05	06	45.692	-08	49	0C.32	+4.27C	B2	IV	33328	131824
237	69 LAM	ERI KURSI AL JAOUZAH II	06	05	48.671	-37	19	41.23	+5.010	B9	V	42167	196514
164	THE	COL KURUD I	06	14	46.276	-35	07	22.03	+4.36C	S8	III	43785	196647
165	KAP	COL KURUD II	00	46	05.113	+07	18	47.33	+4.43D	K5	III	46564	109474
392	63 DEL	PSC KUTON I	01	11	06.933	+03	18	41.34	+5.225	F0	IV-V	7344A	1C9739
393	86 ZET-1	PSC KUTON II	01	11	08.346	+07	18	52.03	+6.27C	F6	V	7345BC	109740
394	86 ZET-2	PSC KUTON III	13	03	37.463	+45	32	01.23	+5.66C	K1	III	11384	44465
89	34 UPS	CVN LA SUPERBA	17	27	21.652	-37	15	28.57	+2.70D	S3	IB	159408	208896
446	SCO	LESAT	05	56	18.652	+32	12	4C.05	+2.66C	S9	.5VP	403124B	58636
499	37 THE	AUR MAHASIM	03	42	50.756	+24	12	47.01	+3.978	B7	III	23409	76155
459	20 TAU	MAIA	04	52	00.305	+11	20	45.3	+5.15	A3	V	31283	94197
332	6 -G	ORI MANICA	01	08	02.554	+54	53	04.32	+4.332	A7	V	6361	22070
121	33 THE	CAS MARFAK	16	28	23.341	+02	05	31.06	+3.81C	A1	V	14885748	121658
328	10 LAM	OPH MARFIK	23	02	16.052	+14	56	03.11	+2.496	S9	.5III	218045	108378
357	54 ALP	PES MARKAB	09	20	33.853	-54	47	47.30	+2.493	S2	IV	88329A	236891
523	KAP	VEL MARKEB	16	05	49.389	+17	10	43.81	+5.00D	G8	III	1450014	101951
267	7 KAP-1	HER MARSIC	17	28	42.997	+26	08	42.49	+9.44C	K4	III	158895	85163
268	76 LAM	HER MASYM	22	40	39.264	+29	57	33.42	+2.39N	G2	II-III	215182A	90734
362	44 ETA	PEG MAYAR	06	40	51.363	+25	10	56.92	+2.988	G8	IB	48329A	88682
253	27 EPS	GEM MEBSUTA	12	12	57.584	+57	18	36.95	+3.310	A3	V	106591	28315
492	69 DEL	UMA MEGREZ	05	32	22.913	+09	54	08.35	+3.351	OB	+80.5V	36861/24B	112921
344	39 LAM	ORI MEISSA	07	01	03.622	+20	39	43.45	+3.700	F7	IV	52373A	79031
254	43 ZET	GEM MEBUDA	02	57	01.871	+08	42	33.54	+4.657	B5	V	18604	110889
148	91 LAM	CEI MENKAB	05	55	51.579	+44	56	40.69	+1.900	A2	V	401904P	40750
495	34 BET	AUR MENKALINAN	02	59	39.744	+07	53	41.15	+2.517	M2	III	198884	110920
139	92 ALP	CET MENKAR	14	03	43.877	-36	07	29.64	+2.075	K0	III	123139	205188
127	5 THE	CEN MENKENT	03	55	42.825	+05	38	56.50	+4.037	B5	V	24912	56856
377	46 XI	PER MENKIB	10	58	50.251	+56	33	03.12	+2.377	A1	V	95418	27876
490	48 BET	UMA MERAK	14	47	31.671	+46	19	25.56	+5.71C	Df4	V	130945	45225
63	38 -H	B00 MERGA	07	36	46.323	-26	41	12.53	+4.509	S8		615554	174198
399	-K-1	PUP MERKES (A)	07	36	46.820	-26	41	15.89	+4.629	S3		61556BC	174199
600	-K-2	PUP MERKES (B)	03	43	21.495	+23	47	38.9	+4.176	S6	IV NN	23480	76172
462	23 TAU	HEROPE	01	50	46.872	+09	02	57.87	+4.554	S9	V	115034	92681
37	5 GAM-2	ARI MESARTIM (A)	01	50	46.855	+19	03	06.11	+4.673	S1	P	115028	92680
36	5 GAM-1	ARI MESARTIM (B)	09	12	39.662	+69	30	35.63	+1.678	AO	III	80007	250495
113	1 BET	CAR MIAFLACIUS	12	44	47.037	-59	24	56.53	+4.265	BO	.5IV	111123	240259
183	8 BET	CRU RIMOSA	08	35	0C.594	+05	52	45.60	+4.142	AO	V	113262	116965

TABLE 4 CONTINUED  
STAR NAMES AND STAR DATA ORDERED BY STAR NAME

STAR NUMBER	DESIGNATION	STAR PROPER NAME	RT. ASCEN. HR MIN SEC			DECLINATION DEG MIN SEC			P VISUAL MAG.	V SPECTRAL CLASS	S HENRY DRAPER CAT. NO.	SAO#	CAT. NO. C	STAR PROP.	
			0	8	40	0	36	59.6							
275	7	ETA HYA	MINAZAL II	08	40	36.596	0	03	34	45.66	*4-289	B3	V	117050	
273	11	EPS HYA	MINAZAL III	08	44	07.755	0	06	36	12.91	L	+3.366	30	III+F?	117112
278	13	RHO HYA	MINAZAL IV	08	45	47.715	0	06	01	25.07	*4-347	A0	V	75137AB	0
274	16	ZET HYA	MINAZAL V	08	52	45.076	0	06	15	13.25	*4-316	G9	III	117146	D
528	43	DEL VIR	MINELAUVA	12	53	04.996	0	03	40	07.60	*3-369	M3	III	117254	
279	5	SIG HYA	MINKALSHUJA	08	36	08.611	0	03	31	05.48	*4-435	K2	III	119674	
178	2	EPS CRV	MINKAR	12	07	32.919	-22	20	30	12	*2-993	K3	III	116988	
292	1	KAP LEO	MINKARASAD	09	21	44.777	+26	23	55.32	*4-46C	K2	III	105707		
336	34	DEL-1 ORI	MINTAKA	05	29	27.017	-00	20	04	41	*2-200	*09.511	*	80807	C
152	68	OMI CET	MIRA	02	16	49.445	-03	12	13.39	*2-CCC	*09.511	*	36486A		
4	43	BET AND	MIRAC-1	01	06	55.456	+35	21	21.74	*2-060	MD	III	14386AF	DV	
375	15	ETA PER	MIRAM	02	47	01.316	+57	17	03.57	*5-390	G5	II	6860	54471	
372	33	ALP PER	MIRFAK	03	20	44.441	+49	41	06.04	*1-903	F5	IB	17506A	23655	
95	23	GAM TRI	MIRZA	07	51	29.713	-15	33	26.79	*4-155	BB	II	20902	38787	
94	2	BET CMA	MIRZAM	06	20	29.789	-17	55	47.23	+1-980	B1	II-III	4744	152303	
376	27	KAP PER	MISAM	03	06	06.716	+44	40	1C.21	*3-793	K0	III	129805	D	
371	7	CHI PER	MISAM AL THURAYYA I	02	14	32.316	+57	17	03.57	*2-060	MD	III	19976A		
371	-H	PER MISAM AL	THURAYYA II	02	15	42.013	+56	56	22.44	*6-615	B2	IA	13994A	23149	
480	4	BET TRI	MIZAN	02	05	33.519	+39	45	06.52	*2-397	A5	III	14143A	23182	
330	92	-C ORI	MIZAN BATIL I	05	32	55.055	-04	52	1C.72	L	+4-59C	B2	III	13161A	55306
43	1HE-2	ORI	MIZAN BATIL II	05	32	55.049	-05	52	1C.72	*5-077	0	IV	37018A	151428	
331	49	-D ORI	MIZAN BATIL III	05	36	27.836	-07	14	21.42	*4-793	IV	IV	37041A	132321	
494	79	ZET-1 UMA	MIZAR (A)	13	21	54.016	+55	11	09.46	*2-210	A2	V	37507A	23141	
995	79	ZET-2 UMA	MIZAR (B)	13	21	55.868	+55	10	56.63	*3-95C	A2	H	11665A	28737	
425	6	GAM CEN	MULIFAIN	12	38	44.898	-48	41	07.32	*2-157	AD	III	116057B	223603	
434	5	KAP SCO	MULA	17	39	01.508	-39	00	22.76	*2-412	B2	IV	16057B	223603	
322	62	GAM QPO	MULIP-GEN	17	45	23.019	+02	43	28.28	*3-739	AD	V	16057B	223603	
69	8	ETA BOO	MUP-RID	13	52	18.168	+16	38	51.35	*2-626	GD	IV	16057B	223603	
504	1	OMI UMA	MUSCIDA	09	26	07.631	+60	53	14.56	*3-347	G5	III	121370	116657B	
88	77	XI CNC	NAH-N	09	56	29.125	+22	14	55.35	*5-14C	KD	III	71369A	14573	
33	91	-C-1 ARI	NAIR AL BUTAIN	09	56	29.125	+22	14	55.35	*5-14C	KD	III	78515	80666	
422	27	PHI SGR	NAHALSADIRAH I	02	47	02.036	+27	03	20.55	*3-610	B8	V	17573	75596	
921	90	TAU SGR	NAHALSADIRAH II	18	42	31.266	-27	02	38.48	*3-177	B8	III	17330D	187239	
923	47	CHI-1 SGR	NAHALSADIRAH III	19	03	49.160	-27	44	43.14	*3-315	K1	III	177716	187683	
924	49	CHI-2 SGR	NAHALSADIRAH IV	19	22	14.012	-24	36	26.63	*5-02C	QAS	III	1823624E	188101	
414	41	ETA SGR	NAHALWARIID	13	22	29.169	-20	03	43.16	*5-14C	K4	III	182416	188101	
401	28	BET PUP	NAOS	18	14	14.513	-36	46	43.49	*3-113	M3	II	187616A	188101	
950	28	BET SCP	NASAK SHAMIYA I	09	01	49.552	-39	51	40.83	*2-255	F5	IV	66811	2C9957	
951	41	GAM SCP	NASAK SHAMIYA II	15	43	52.610	+15	43	37.42	*3-672	A2	IV	1410C3A	198752	
951	20	GAM SCP	NASAK SHAMIYA III	15	54	08.455	+15	43	24.77	*3-301	F6	V	142860	198752	
265	37	EPS SCP	NASAK SHAMIYA IV	16	19	49.277	+19	16	02.32	*3-745	A9	III	187616A	188101	
454	13	DEL-2 SCP	NASAK YAMANI I (A)	15	49	19.243	+04	37	36.85	*3-703	A	H	141795	188101	
452	13	DEL-1 SCP	NASAK YAMANI I (B)	15	32	24.681	+10	42	12.82	*4-173	S	IV	138917B	188101	
109	40	GAM CAP	NASHIRA	21	37	19.372	-16	53	21.05	*5-103	DFO	IV	20608B	188101	
316	6	ZET-1 Lyr	NASR ALWAKI I	18	43	02.339	+37	33	06.28	*4-347	A8	H	16456C	188101	
317	7	ZET-2 LYR	NASR ALWAKI II	19	43	04.779	+37	32	28.33	*5-73C	F0	IV	173648A	67324	
118	27	GAM CAS	NAVI	00	53	40.124	+60	26	47.38	*2-124	SO	IV	5394A3	11482	
65	42	BET B00	NEKKAR	15	00	03.664	+4C	35	12.80	*3-489	G8	III	13320B	101623	
51	51	AND NEMBUS	NI-AL	01	34	54.616	+48	22	32.66	*3-570	K3	III	3927	16456C	
299	9	BET LEP		05	26	06.090	-2C	47	52.90	*2-835	G5	III	36019AB	170457	

TABLE 4 CONTINUED

STAR NAMES AND STAR DATA ORDERED BY STAR NAME

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RT. ASCEN- -HR MIN SEC			DECLINATION DEG MIN SEC			P N	VISUAL MAG.	SPECTRAL CLASS	S N	HENRY DRAPER CAT. NO.	SAO* CAT.-NO.	STAR PROP.
			06	25	59.627	+20	14	44.06							
257	18 NU	GEM NUCATAI	18	52	09.927	-26	21	38.29	+2	063	B2	V	175191	187448	
420	34 SIG	SGR NUNKI	15	55	49.301	-25	59	19.14	+2	997	B1	V	143018A8C	183987	0
442	6 PI	SCO NUR	15	25	45.944	+28	16	37.26	+3	668	F0	III	1379CE	83831	
173	3 BEI	CRB NUSAKAN	04	21	41.595	+19	04	16.36	+3	534	K0	III	128305	93954	
470	74 EPS	TAU OCULUS BOREUS	20	21	42.283	-56	53	5C.02	+1	92C	B3	IV	191924	246574	
356	1 ALP	PAV PEACOCK	05	37	50.211	-34	05	58.73	+2	630	B8	V E	37795	196059	
162	COL	P4ACT	11	51	12.566	+53	59	21.98	+2	433	A0	V	103267	218779	
991	64 GAM	UMA PHECDA	15	20	47.347	+72	00	42.97	+3	043	A3	II-III	137422	8220	
517	13 GAM-2	UMI PHERKAD MAJOR	15	17	07.110	+12	00	19.08	+5	02C	K4	III	136726	8207	
516	11 GAM-1	UMI PHERKAD MINOR	08	17	33.902	+24	10	52.39	+5	310	*89	V	70011	80113	
887	19 LAM	CNC PIAUTOS	03	46	12.351	+23	59	07.56	+5	007	B8	P	23862	76229	
663	28 BU	TAU PLEIONE	01	48	48.786	+83	01	43.74	+2	500	*F8	II-III	89990A	308	D V
514	1 ALP	UMI POLARIS	07	42	15.17	+28	08	55.13	+1	146	K0	III	625094	79666	D
250	78 BEI	GEM PCLLUX	12	39	07.452	-01	10	31.58	C	2.745	FD	V	110379/Q48	138917	D
527	29 GAM	VIR PORRIMA	10	50	31.221	+34	29	05.62	+3	8C8	K0	III-IV	94264	62297	D
296	0 OMI	LMI PRAECIPILA	20	14	52.647	-12	33	51.04	+4	240	S3	II-III	192876A	163422	D
105	5 ALP-1	CAP PRIMA SIEDI	14	23	23.610	+52	04	52.32	+4	046	F7	V	126660	29137	
70	23 THE	BOO PROCYON	07	36	41.117	+05	21	16.81	C	0.357	F5	IV-V	61421A3	115756	D
103	10 ALP	CMI PROPS	06	11	51.518	+22	31	23.36	+3	2CC	*K3	III	42995A8	78135	D V
255	7 ETA	GEM RANA	03	40	51.035	-03	55	53.05	+3	53U	K0	IV	23249	130686	
212	23 DEL	ERI RANA	09	49	55.334	+26	14	36.08	+3	89C	K2	III	85503	81064	
239	24 MU	LEO RASALAS	17	12	21.948	+14	26	45.34	+3	194	H5	II-III	156014A	156280	D
262	64 ALP-1	HER RASALGETHI (A)	17	12	22.274	+14	26	43.71	+5	477	S5	II-III+F2	156015B	102681	D
263	64 ALP-2	HER RASALGETHI (B)	17	32	36.696	+12	35	41.92	+2	072	A5	III	159356	102932	C
320	55 ALP	OPH RASAL-IGUE	17	29	18.05C	+52	20	15.65	+2	755	G2	II	159191AB	30429	C
205	23 BEI	DRA RASTABAN	08	07	59.455	-47	11	13.31	+1	833	O7	+WC7	87273A	219504	D
522	26 GAM-2	VEL REGOR	10	05	42.647	-12	12	44.54	+1	351	S7	V	819014	98967	D
203	32 ALP	LEO REGULUS	10	15	56.500	+37	52	35.55	+4	330	*P	*	191327	69773	N
185	34 P	CYG REVENANTE OF THE SWAN	05	12	07.990	-08	15	26.65	+C.	153	B6	II-III	34085A	131907	D
334	19 BEI	ORI RIGEL	14	40	25.293	-05	26	30.92	+3	393	F3	IV	129502	140090	
535	107 MU	VIR RIGIL ANNA	14	36	11.253	-60	37	46.84	+C.	059	G2	IV	128620/1AB	196524AB	D
123	1 ALP	CEN RIGIL KENTAUROS	20	35	12.206	+14	25	12.31	C	1.593	F5	IV	195556AB	106316	D
197	6 BEI	DEL ROTANEV	20	28	32.540	+49	46	57.97	+4	95C	B2	V	195556AB	49712	C
195	45 OME-1	CYG RUCBA	01	22	31.498	+53	59	34.36	+2	577	A5	V	9538	22268	
119	37 DEL	CAS RUC-18A4	19	20	25.492	-40	42	43.10	+3	96C	B3	III	181969	228659	
407	1 ALP	SGR RUKBAT	17	07	30.461	-15	33	52.89	L	2.430	A2.5V	II-III	155153AB	160332	D
326	35 ETA	OPH SABIK	22	19	04.420	-01	38	23.77	+3	945	AU	V	212061	146044	C
364	47 LAM	PEG SADACHIBIA	22	47	35.191	+24	20	13.72	+3	490	G8	III	216131	90816	
9	98 GAM	AQR SADAL BARI	22	39	24.327	+29	02	46.12	+4	8C7	A1	V	214994	50717	
365	48 MU	PEG SADAL HAIR	22	03	12.945	-00	33	48.59	+2	333	S2	II-III	209750	145862	
368	43 OMI	AQR SADAL MELIK	22	02	13.955	-12	30	54.30	+4	8C0	B9	V	209409	145837	
7	34 ALP	AQR SADALMULK	22	44	07.173	+23	18	07.41	+3	355	G8	II-III	215665	90775	
18	31 OMI	AQR SADALNAZI	21	28	55.649	-05	47	31.68	+2	878	GO	II-III	204867	145457	D
364	47 LAM	PEG SADALNUZUD	20	20	25.927	+40	05	44.59	+2	214	F9	II-III	194093A	49528	D
8	22 BEI	AQR SADR AL KAITOS I	02	23	31.955	-12	30	54.30	+2	333	S2	II-III	15130	148385	
89	37 GAM	CET SADR AL KAITOS II	02	29	42.948	-15	27	47.46	+4	748	F5	IV-V	15798	148445	
154	72 RH0	CET SADR AL KAITOS III	02	31	08.592	-12	05	0C.36	+6	837	F5	IV-V	16620AB	148526	D
155	76 SIG	CET SADR AL KAITOS IV	02	41	44.470	-14	04	10.17	+4	235	S7	V	17081	148575	
193	83 EPS	CET SAIF AL JABBAR	05	21	57.676	-02	26	25.58	+3	35C	BO	II-III	3541AE	132071	D

TABLE 4 CONTINUED

## STAR NAMES AND STAR DATA ORDERED BY STAR NAME

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RT. ASCEN. HR MIN SEC	DECLINATION DEG MIN SEC	P VISUAL MAG.	V SPECTRAL CLASS	S HENRY DRAPER CAT. NO.	SAO CAT. NO.	STAR PROP.
							N	N	N
325	13 ZET	OP-4	SAIK	16 34 24.137	-10 28 02.91	*2.567	0.5V	143757	160006
343	53 KAP	ORI	SAIP-4	05 45 23.013	-09 41 09.45	*2.564	0.5IA	38771	132542
369	62 RAU	PEG	SALM	23 18 09.505	+23 27 59.22	*4.590	A5 IV	220061	91186
431	THE	SCO	SARGAS	17 33 43.371	+42 58 05.15	*1.86C	FQ IB	159532	228201
266	65 DEL	HER	SARTIN	17 12 58.555	+24 53 49.78	*3.140	43 IV	1561644	84951
228	53 -L	ERI	SCETRUM	04 35 53.315	-14 29 01.60	*3.358	K2 III	29503AB	D
358	53 BET	PEG	SCHEAT	23 01 20.770	+27 43 40.45	*2.560	M2 II-III	217905A	149781
116	18 ALP	CAS	SCIECAR	00 37 39.313	+56 15 46.60	*2.223	KG II-III	90981	DV
147	8 IOI	CET	SCIMAL I	00 16 52.784	-03 06 03.44	*3.540	K2 III	3712AB	21609
119	52 PI	AGR	SEAT	22 22 43.181	+01 07 22.81	*4.66C	B1 V PE	128694	D
106	6 ALP-2	CAP	SECUNDA GIEDI	20 15 16.878	-12 42 04.49	*3.354	59 III	192947AB	163427
71	21 IOI	BOC	SECUNDUS ASELLUS	14 14 23.673	+51 35 49.93	*4.15C	A7 V	1251614	29071
120	45 EPS	CAS	SEGIN	01 50 46.379	+63 25 23.89	*3.370	B3 IV P	11415	12031
66	27 GAM	BOC	SEGINUS	14 30 03.937	-19 31 34.12	*3.036	A7 III	127762	64203
403	5 ALP	SGE	SHAM	19 37 51.512	+17 53 51.21	*4.358	GD II	195758A	105120
309	31 LYN	LYN	SHAUKAH	08 19 25.154	+03 21 05.89	*4.45	K5 III	70272	42319
435	35 LAM	SCO	SI-AULA	17 30 12.626	-37 04 09.63	*1.617	B1 V	158926	208954
311	10 BET-1	LIR	SELIK	18 48 13.935	+13 18 12.51	*2.4LC	* B PE	174638/EA	67451
35	6 BEI	ARI	SIERATAN	01 51 52.340	+20 33 52.03	*2.526	A5 V	11636	75012
93	9 ALP	CMA	SIRIUS	06 42 56.712	-16 38 46.37	C	-1.457 C	48915AB	151881
15	63 KAP	AQR	SITULA	22 35 10.023	+04 29 11.39	*0.525	K2 III	214376	D
10	76 DEL	AQR	SKAT	22 51 53.9C1	-16 05 13.92	*3.266	A3 V	216627	165375
525	67 ALP	VIR	SPICA	13 22 33.301	10 54 03.36	*0.368	B1 V	116658	157923
460	21 TAU	SITERPE I	03 42 55.370	+24 24 00.00	*5.757	BB V	24432	76159	
461	22 TAU	SITERPE II	03 43 03.946	+24 22 24.33	*6.430	B9 V	23441	76164	
295	14 OMI	LEC	SUBRA	09 38 29.0CB	+07 14 56	*3.48C	A2 +F6 II	83808/5A	58709
524	52 LAM	VEL	SUJAIL	09 06 09.310	-43 13 47.60	*2.240	K5 IV	78647AB	220878
312	14 GAM	LIR	SULAFAT	18 57 04.284	+32 37 11.26	*3.25C	B9 III	176437A	67663
367	46 XI	PES	SUUDALNUJUM	22 44 11.592	+11 54 57.24	*4.203	F7 V	245648AB	108165
196	9 ALP	DEL	SVALOCIN	20 37 18.874	15 44 04.30	*3.666	B9 V	195861A	106357
532	93 IOI	VIR	SYRHA	14 13 23.345	-05 45 46.13	*4.077	F7 III-IV	124850	139824
349	1 PI -3	ORI	TABIT	C4 47 07.390	+06 52 32.26	*3.19C	F6 V	30652	112106
501	34 MU	DRA	TAIS I	19 20 23.896	+65 37 05.16	*4.593	A2 IV	182564	18299
500	33 LAM	DRA	TAIS II	C2 35.937	+67 43 51.21	*4.513	K3 III	190940	18676
436	46 MU -1	SCO	TALI AL SHAULAH I	16 48 28.673	-37 57 48.32	*3.140	* B1.5V	*	208102
437	54 MU -2	SCO	TALI AL SHAULAH II	16 48 56.589	-32 56 03.11	*3.56C	B2 IV	151985	268116
498	9 IOI	UMA	TALITHA	09 55 47.626	+48 14 22.05	*3.146	A7 V	76644A	42630
501	34 MU	UMA	TANIA ALSTRALIS	10 19 21.469	+01 45 06.25	*3.03C	MO III	89758	43310
500	33 LAM	UMA	TANIA BOREALIS	10 19 05.353	+43 03 53.54	*3.455	A2 IV	89921	43268
22	50 GAM	AGL	TARAZED	19 43 52.9C7	+10 29 24.38	*2.717	K3 II	186791	105223
465	19 -Q	TAU	TAYSETA	03 42 13.572	+24 13 42.91	*4.293	B6 V	23338	76140
83	16 ZEI-1	CNC	TEGMINE (AB)	08 09 20.753	+17 47 55.93	L	*5.05C	F8	57645
84	16 ZEI-2	CNC	TEGMINE (C)	08 09 21.213	+17 47 59.39	L	*6.200	DF2	68256/1AB
926	58 CHE	SGR	TEREBELLUM I	19 52 46.744	-26 01.47	*4.7KU	D65	68255C	188722
405	59 -3	SGR	TEREBELLUM II	19 53 52.375	-27 18 14.61	*4.520	GK3	188603	188742
404	60 A	SGR	TEREBELLUM III	19 55 54.576	-26 19 02.59	*4.82C	G65	189005	188778
406	62 -C	SGR	TEREBELLUM IV	19 59 35.193	-27 51 01.64	*4.503	M4 IV	189753	188844
73	17 KAP-2	B00	TERTIUS ASELLUS (A)	14 11 41.519	+52 01 23.55	*4.51C	A7 IV	124675A	29046
72	17 KAP-1	B00	TERTIUS ASELLUS (B)	14 11 40.271	+52 01 15.47	*6.698	F2 V	124674B	29045
353	36 UPS	CRI	THASIT	05 29 3L.EC7	-07 20 12.87	*4.616	BC V	36512	132222

TABLE 4 CONTINUED

## STAR NAMES AND STAR DATA ORDERED BY STAR NAME

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RT. ASCEN.			DECLINATION			SPECTRAL			SAO#	STAR CAT. NO.
			HR	MIN	SEC	DEG	MIN	SEC	VISUAL	MASS.	V		
2	43 A	AND	14	46	.45	00	.17		+5.260	K0	III	3057	37275
245	52 UPS-2	ERI	01	27	05.505	-30	39	.98	+3.81C	K0	III	29291	195146
67	49 OEL	THEEMIN	04	33	36.315	+33	30	.20	+3.479	G9	III	135722A	64589 D
	300	T-113A	15	13	29.117	+33	30					123255	16273
204	11 ALP	DRA	14	03	01.963	+68	36	.57	+3.652	A0	III	10761	110110
395	110 OMI	PSC	01	42	48.368	+08	54	.64	+4.258	G8	III	3702C-34BCD	132314 D
340	41 THE-1	ORI	05	32	48.995	+05	25	.62	+4.6CC	06	IV	189119AB	9540 D
208	63 EPS	TYL	19	48	21.063	+70	08		+3.933	G9	III		
101	16 OMI-1	CMA	06	52	03.362	-24	07	.87	+3.86C	K3	IAB	50877	172542
280	31 TAU-1	HYA	09	26	36.618	-02	32	.04	+4.597	F6	V	81997A	136895
281	32 TAU-2	HYA	09	29	25.987	-00	57	.98	+4.558	A3	III	82446	136932
270	33 A	HYA	09	32	02.913	-05	41	.92	+5.550	GK1		82870	136964
276	35 JOI	HYA	09	37	18.152	-00	54	.79	+3.863	K3	III	83618	137035
449	24 ALP	SCP	15	41	49.151	+06	34	.93	+2.546	K2	III	140573A	121157 D
433	10T-2	SCO	17	46	41.171	-00	04	.02	+4.8CC	CA3		161312A	228466 D
170	7 R	CRB	15	46	30.695	+28	18	.24	+5.300	*	F PEP	141527	84015 V
310	3 ALP	LYR	18	35	14.655	+18	44	.68	+C+C4	A0	V	172167A	67174 C
529	47 EPS	VIR	12	59	41.210	+11	13	.90	+2.929	G9	III	113226	100384
252	55 DEL	SEM	07	17	08.265	+22	04	.08	+3.526	FU	IV	58986A3	79294 D
163	9 BET	COL	05	49	11.727	-35	47	.09	+3.110	K2	III	33425	196240
96	25 DEL	WEZEN	07	06	21.436	-26	18	.56	+1.838	F8	IA	546C5	173047 D
324	2 EPS	OP-4	16	15	40.348	-04	34	.57	+3.233	G9	III	146731	141086
323	1 DEL	YED POSTERIOR	16	11	43.325	-03	34	.01	+2.727	M1	III	146051	141052
519	23 DEL	YED PRICR	17	48	18.338	+96	36	.78	+4.347	A1	V	166205	2937
531	15 ETA	ZIBAL	12	17	26.761	-00	23	.65	+3.86C	A2	V	107259	138721
231	34 GAM	ZANITH	03	55	41.672	-13	38	.17	+2.953	M0	III	250254	149283 D
526	5 BET	ZARAK	11	48	05.387	-02	47	.61	+3.6LC	F8	V	102870	119076
233	13 ZET	VIR ZAVIJAVA	03	13	24.143	-09	00	.50	+4.798	A7	H	20320	130387
287	68 DEL	ERI ZIBAL	11	11	24.143	-09	00	.50	+2.563	A4	V	97603	81727
96	49 XOI-2	LEO ZOSMA	11	11	27.585	+20	47	.52	+2.563	A4	V	747394	80416 D
85	48 10I-1	CNC ZUBINAY (A)	08	43	40.514	+20	56	.39	+4.030	G8	II	747398	80415 D
		ZUBINAY (B)	08	43	38.685	+28	56	.51	+6.57C	A3	V	159466	
305	44 ETA	LIB ZUBAN AL KRAVI	15	91	15.348	-15	30	.77	+5.900	F0	III	140417	183139
307	20 SIG	LIB ZUBEN CRABI	15	C1	08.247	-25	05	.12	+3.318	M4	III	133216	
302	8 ALP-1	LIB ZUBENE GENUBI I	14	97	54.359	-15	47	.90	+5.153	F5	IV-V	130619B	158836 D
503	9 ALP-2	LIB ZUBENE GENUBI II	14	98	06.447	-15	50	.59	+2.747	A3	V	130841A	15684C D
304	27 BET	LIB ZUBEN SCHAMALI	15	14	18.732	-03	11	.93	+2.612	B8	V	135742	140430
306	21 NU	LIB ZUBEN HAKRABI	15	C3	49.929	-16	03	.08	+5.28C	K5	III	133774	159028
292	72	LEO ZUBRA	11	12	32.937	+23	22	.98	+4.625	M3	III	97778	81736

TABLE 5

STAR NAMES AND STAR DATA ORDERED BY RIGHT ASCENSION

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RT. ASCEN. HR MIN SEC			DECLINATION DEG MIN SEC			VISUAL MAG.	SPECTRAL CLASS	S N HENRY DRAPER CAT. NO.	SAO* CAT. NO.	STAR PROP.			
			00	05	07	28	49	52-12			358	73765	D			
3	21 ALP	AND ALPHERAIZ	00	05	07	28	49	52-12	*2-014	F2	43248	21133	D			
	11 BET	CAS CAP4	00	06	29	58	52	26-77	*2-215	B2	986	91781				
353	86 GAM	PEG ALGENIB	00	10	39	44	14	54	20-57	*2-827	K2	1522A	126894	D		
147	8 101	CET SCHEMELI	00	16	52	48	-69	06	03-44	*3-59C	K2	2262	215092			
386	KAP	P4E ARIAL I	00	23	49	-90	-43	57	25-67	*3-939	A7	V N	2261	215093	DV	
383	ALP	P4E ANKAA	00	23	49	-02	-92	34	39-55	*2-39C	K0	III	21609			
116	18 ALP	CAS SCEDAR	00	37	39	-13	+56	15	49-60	*2-223	K0	II-III	3112AB			
387	MU	PHE ARIAL II	00	38	58	-03	-46	21	33-10	*4-593	G8	III	215194			
140	16 BET	CET DENEB KAIROS	00	41	04	-81	-18	15	38-78	*2-028	K1	III	4129	14742C	D	
158	17 PHI-1	CET ALNITHAM I	00	41	40	-02	-10	52	53-49	*4-75C	K0	III	4180	147423		
392	63 DEL	PSC KUTON I	00	46	05	-11	13	+07	19	47-93	*4-43D	K5	III	4656	109474	
159	19 PHI-2	CET ALNITHAM II	00	47	37	-28	-10	54	47-65	*5-189	F8	V	4813	147470		
160	22 PHI-3	CET ALNITHAM III	00	53	31	-02	-22	-11	32	13-09	*5-30	K9	III	5437	147519	
118	27 GAM	CAS NAVI	00	53	40	-24	+60	26	47-38	*2-51C	B0	IV E	535648	1482	D	
161	23 PHI-4	CET ALNITHAM IV	00	56	13	-58	-31	38	58-40	*5-78D	*	G67	*	5722	147546	
384	BET	P4E ARIAL III	01	C3	54	-35	-46	59	09-78	L	*3-3CC	G8	III	653548	215365	D
122	30 MU	CAS AL MARFAK	01	04	55	-68	+54	40	32-96	*5-163	G5	V P	6582	22024		
145	31 ETA	CET DENEB ALGENUBI	01	06	04	-20	-10	26	49-57	*3-937	K3	III	6805	147632		
4	43 BET	AND MIRACH	01	06	55	-45	+35	21	21-74	*2-060	MO	III	6860	54471	D	
121	33 THE	CAS MARFAK	01	08	22	-59	+54	53	04-32	*4-332	A7	V	6961	22070		
393	86 ZEI-1	PSC KUTON II	01	11	06	-91	03	19	41-34	*5-215	F0	IV-V	7349A	109739	D	
394	86 ZEI-2	PSC KUTON III	01	11	06	-33	+07	18	52-03	*6-27C	F6	V	7349BC	109740	D	
388	NU	P4E ARIAL IV	01	12	55	-90	-45	47	53-12	*4-95J	F9	V	7570	215428		
6	46 XI	AND ADHIL	01	19	23	-03	+95	16	02-87	*4-867	K0	III-IV	8203	37155		
146	45 THE	CET AL NAYMAT I	01	21	31	-16	-08	26	22-16	*3-603	K0	III	8512A	129274	C	
119	37 DEL	CAS RUCHBAH	01	22	31	-98	+59	58	34-36	*2-637	A5	V	85538	222668		
385	6 GAM	P4E ARIAL V	01	26	11	-77	-43	34	25-94	*3-400	K5	II	9053	215516		
2	49 A	AND THAIL	01	27	05	-50	+96	45	00-17	*5-26C	K0	III	9057	37275		
1	51	AND NEMBUS	01	27	05	-53	+95	16	02-87	*4-867	K3	III	9927	37375		
229	ALP	ERI ACERNAR	01	35	51	-10	-57	29	24-93	*0-43C	B5	V	10144	232481		
156	52 TAU	CET AL NAYMAT II	01	41	44	-60	-16	12	00-50	*3-496	G9	V P	10700	147986		
395	110 OMI	PSC TORCULAK	01	92	44	-96	+08	54	24-69	*4-258	G8	III	10761	110110		
514	1 ALP	UMI POLARIS	01	48	49	-86	+89	01	4-74	*F8	18	*	8890A	308	DV	
144	55 ZET	CET BATEN KAITOS	01	49	59	-46	-10	34	52-90	*3-223	K2	III	11353	148059		
479	2 ALP	TRI CAPUT TRIANGULI	01	50	13	-40	+29	20	10-14	*3-413	F6	IV	11443	74996		
320	45 EPS	CAS SEGIN	01	50	46	-18	+61	25	29-89	*3-33C	B3	IV P	11415	12031		
36	5 GAM-1	ARI MESARTIM (B)	01	50	46	-85	+19	03	06-11	*4-673	S	P	11502B	92680	D	
37	5 GAM-2	ARI MESARTIM (A)	01	50	46	-82	+19	02	57-87	*4-594	S	V	11503A	92681	D	
35	6 BET	ARI SHERATAN	01	51	52	-340	+20	33	52-09	*2-626	A5	V	11636	75012		
157	59 UPS	CET AL NAYMAT III	01	57	38	-91	-21	19	02-71	*3-39C	H1	III	12274	167471		
390	113 ALP	PSC ALRESCHA	01	59	27	-39	+02	31	23-04	*3-820	A	H-AZ P	124467/AB	110291	D	
5	57 GAM-1	AND ALMACH	02	0	49	-17	+42	05	27-01	*2-12	S	K3	125334	37734	D	
34	13 ALP	ARI YAMAL	02	0	49	-91	+23	13	37-07	*2-009	K2	III	12929	75151		
480	9 BET	TRI MIZAN	02	0	53	-59	+34	45	06-32	*2-937	A5	III	13161	55306		
150	65 XI -1	CET AL KAFF AL JID-MAH I	02	10	20	-74	+08	36	47-36	*4-160	G8	II	13611	110408		
381	7 CHI	PER MISAM AL THURAYA J	02	19	32	-16	+57	17	09-57	*5-93C	G5	II	13994A	23149	C	
371	5 GAM-2	PER MISAM AL THURAYA II	02	15	42	-01	+13	56	22-44	*6-645	S2	IA	14143A	23182	D	
152	68 OMI	CET MIRA	02	16	49	-45	-03	12	13-19	*2-LCC *	GM6	E	14386AP	129825		
154	72 RHO	CET SADR AL KAITOS I	02	23	31	-95	-12	30	54-30	*4-930	S9	V	15130	148385		
151	73 XI -2 CET	AL KAFF AL JID-MAH II	02	25	29	-75	+08	19	13-15	*4-271	S9	III	15316	110543		

TABLE 5 CONTINUED

## STAR NAMES AND STAR DATA ORDERED BY RIGHT ASCENSION

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RT. ASCEN.			DECLINATION			P		VISUAL MAG.	SPECTRAL CLASS	HENRY DRAPER CAT. NO.	SAO* CAT. NO.	STAR PROP.
			HR	MIN	SEC	DEG	MIN	SEC	N	W					
155	76 SIG	CET SADR AL KAIOS III	02	29	42.349	-15	27	47.46	*4.749	F5	IV-V	15798	148445		
142	82 DEL	CET AL KAFF AL JIDHMAH III	02	36	54.585	+00	06	50.00	*4.664	B2	IV	16582	110665		
143	83 EPS	CET SADR AL KAIOS III	02	37	08.592	-12	05	00.36	*4.937	F5	IV-V	16620A8	148528	D	
30	33 MU	ARI BARANI I	02	37	45.745	+26	57	50.75	*5.295	A3	V	16628A	75510	G	
41	34 MU	ARI KOLEON	02	39	32.489	+19	47	50.66	*5.660	A0	IV-V	16911	93062	D	
31	35 MU	ARI BARANI II	02	40	3C.651	+27	29	44.23	*4.65C	B3	V	16908	75532	D	
141	86 GAM	CET KAFALGIOMA	02	40	42.392	+03	01	34.05	*3.459	A2	V	16970A8	110707	D	
149	89 PI	CET SADR AL KAIOS IV	02	41	44.470	-14	04	1C.17	*4.235	B7	V	148675	17041		
82	87 MU	CET AL KAFF AL JIDHMAH IV	02	42	14.102	+09	54	15.02	*4.260	FO	IV	110723	17094		
32	39 PI	ARI BARANI III	02	49	55.469	+29	02	26.66	*4.513	K1	III	75578	93127	D	
42	42 PI	ARI AL BUTAIN I	02	46	29.805	+17	15	22.06	*5.340	36	IV	175434	93127	D	
375	15 ETA	PER MIRAM	02	47	01.935	+55	41	22.43	*3.767	K3	IB	17506A	23655	D	
33	41 -C-1	ARI NAIR AL BUTAIN	02	47	02.036	+27	03	20.55	*4.610	B8	V	17573	75596	D	
243	2 IAU-2	ERI ANGETENAR	02	48	46.150	-21	12	32.91	*4.763	K0	III	178244	168094	D	
43	46 RHO	ARI AL BUTAIN II	02	53	36.479	+17	49	30.02	*5.500	*DF5	*	19256	93195		
234	3 ETA	ERI AZHA	02	53	58.952	-09	05	45.89	*3.887	K1	III-IV	18322	130197		
379	22 EPS	PER GORGONEA SECUNDA	02	55	33.275	+57	50	6.67	*4.697	A2	V	18411	56047		
48	IHE-1	ERI ACAMAR (A)	02	56	20.825	+21	08	29.91	L	A2	V	18519	70A8	D	
235	1 ERI	ACAMAR (B)	02	56	21.882	-40	30	15.15	*3.264	S	A3	18622A	216113	D	
236	THE-2	ERI ACAMAR (B)	02	56	22.578	-40	30	14.34	*4.263	S	A2	18622A	216114	D	
91	1 LAM	CET MENKAB	02	57	01.871	+09	42	33.54	*4.697	B5	III	18604	110889		
240	8 RHO-1	ERI ALUDHI I	02	58	42.365	-07	51	31.98	*5.745	D6	V	18784	130243		
139	92 ALP	CET HENKAR	02	59	39.744	+03	53	41.15	*2.517	M2	III	19884	110920		
241	9 RHO-2	ERI ALUDHI II	03	00	14.892	-02	52	51.43	*5.31C	566		18953A8	130254	D	
242	10 RHO-3	ERI ALUDHI III	03	01	48.952	-07	47	43.01	*5.257	A3	V	19178	130269		
380	25 RHO	PER GORGONEA TERTIA	03	01	57.195	+38	38	50.86	*3.21C	M4	II-III	19058	561138	V	
373	26 BET	PER ALGOL	03	04	54.356	+40	45	52.46	*2.200	*BB	V	19356A	38591	DV	
376	27 KAP	PER MISAM	03	06	06.256	+44	40	10.21	*3.393	K0	III	19416A	38609	D	
382	28 OME	PER GORGONEA QUARTA	03	08	03.167	+39	25	23.39	*4.613	K0	III	19656	56224		
38	57 DEL	ART BOTINE	03	08	45.885	+19	32	2C.22	*4.25C	K2	III	1978	93328		
40	58 ZET	ARI AL BUTAIN IV	03	12	01.326	+20	51	37.93	*4.997	AQ	IV-V	20150	75810		
233	13 ZEI	ERI ZIBAL	03	13	24.143	-09	00	15.50	*4.799	A7	H	20320	130387		
372	33 ALP	PER MIRFAK	03	20	44.441	+49	41	06.04	*1.803	F5	IB	20902	38787		
232	23 DEL	ERI RANA	03	40	51.535	-09	55	53.03	*5.3C	K0	IV	23249	130686		
378	18 OMI	PER ALATIK	03	41	10.538	+32	07	53.47	L	*3.929	31	III	23180A8	56673	
457	16 TAU	CALAENO	03	41	49.528	+24	22	24.39	*6.430	*5.455	87	IV	23441	76126	
458	17 TAU	ELECTRA	03	41	54.055	+23	57	27.82	*3.702	86	III	23302	76131		
465	19 -G	TAYETA	03	42	13.572	+24	18	42.31	*4.298	86	V	23338	76140		
464	27 -F	TAU MAIA	03	42	50.756	+24	12	47.01	*3.978	87	III	23408	78155		
459	20 TAU	STERCOPE I	03	42	55.370	+24	24	0C.00	*5.757	88	V	23432	76159		
460	21 TAU	TAU CALAENO	03	43	03.846	+24	22	24.39	*6.430	*5.455	87	IV	23441	76126	
461	22 TAU	STERCOPE II	03	43	21.195	+23	47	38.39	*4.176	B1	IV	23480	56799	D	
462	23 TAU	HEROPE	03	44	30.424	+23	57	07.57	*2.970	MD	III	25025A	149283	D	
471	25 ETA	ALCYONE	03	44	30.424	+23	57	07.57	*2.970	MD	III	23630A	76199	D	
464	27 -F	TAU ATLAS	03	46	11.530	+23	54	07.66	*3.626	88	III	23850A8	76228		
463	28 BU	PLEIONE	03	46	12.391	+23	59	07.56	*5.047	89	P	23862	76229		
379	44 ZET	PER ATIK	03	50	58.959	+31	44	12.55	*2.85C	B1	IV	2438AB	56799	D	
231	34 GAM	TAU ZAURAK	03	55	41.672	-13	38	58.17	*2.353	MD	III	25025A	149283	D	
377	46 XI	PER MENGIB	03	55	42.825	+35	39	56.50	*9.037	B5	V	24912	56856		
238	38 OMI-1	ERI BEID	04	09	25.339	-06	57	59.74	*4.045	F2	II-III	26574	131019		
239	40 OMI-2	ERI KEID	04	12	58.161	-07	43	45.83	*4.433	K1	V	26965A	131063	D	

TABLE 5 CONTINUED  
STAR NAMES AND STAR DATA ORDERED BY RIGHT ASCENSION

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RIGHT ASCEN-			DECLINATION			VISUAL			SPECTRAL			HENRY DRAPER CAT. NO.	SAO* CAT. NO.	STAR PROP.
			HR	MIN	SEC	DEG	MIN	SEC	N	MAS.	N	MAS.	N	MAS.			
247	41 UPS-4	ERI BEEMIM I	04	16	00.036	-33	55	09.65	L	+3.553	88.5V	27376AB	194902	D			
468	59 GAM	TAU HYADUM I	04	16	56.651	+15	30	3C.62	K0	III	27371	93868					
477	52 PHI	TAU ALKALBAIN I	04	17	16.436	+27	13	58.39	K1	III	27382A	76558	D				
478	59 CHI	TAU ALKALBAIN II	04	19	32.779	+25	30	46.87	K4	.3EC	27636A	76573	D				
469	61 DEL	TAU HYADUM II	04	20	02.849	+17	25	36.1	K0	III	27697	93897					
246	43 UPS-3	ERI BEEMIM II	04	22	09.4C3	-34	07	54.81	K1	.35C	28028	194984					
479	65 KAP-1	TAU ALKALBAIN III	04	22	23.083	+22	10	51.94	K1	III	27934	76601					
475	67 KAP-2	TAU ALKALBAIN IV	04	22	26.632	+22	05	13.99	A7	V	27946	76602					
476	69 UPS	TAU ALKALBAIN V	04	23	18.680	+22	42	06.75	K4	.2B3	28024	76608					
470	74 EPS	TAU OCULUS BOREUS	04	25	4.585	+19	04	16.36	K0	III	28305	53954					
472	77 THE-1	TAU HYADUM III	04	25	42.382	+15	51	10.15	K0	III	28307	93955					
473	78 THE-2	TAU HYADUM IV	04	25	48.220	+15	45	41.80	K1	.4C9	28312	93957					
244	50 UPS-1	ERI BEEMIM III	04	31	32.818	-29	51	55.49	K6	III	29095	169570					
466	67 ALP	TAU ALDEBARAN	04	33	02.895	+16	24	37.51	K5	III	29139AB	94027	D				
245	52 UPS-2	ERI T-HEEMIN	04	33	36.315	-30	39	48.99	K0	III	29291	195148					
228	53 -L	ERI SCEPIRUP	04	35	53.315	-14	24	01.60	K2	III	29503AB	149781	D				
349	1 PI -3	ORI TABIT	04	47	07.390	+06	52	32.26	F6	V	30652	112106					
349	2 PI -2	ORI AL TAJ I	04	47	53.547	+08	48	57.64	A0	V	30739	112124					
350	3 PI -4	ORI AL TAJ II	04	48	32.421	+05	31	16.34	K5	III	30936	112142					
395	4 OMI-1	ORI AL KUMMI	04	49	42.658	+19	10	08.31	K3	S	30959	94176					
351	8 PI -5	ORI AL TAJ III	04	51	38.661	+02	21	37.24	K2	III	31237	112197					
332	6 -G	ORI MANICA	04	52	CC-3C5	+11	20	45.39	A3	V	31283	94197					
347	7 PI -1	ORI AL TAJ IV	04	52	0.440	+10	04	22.53	AU	V	31295	94201	D				
346	9 OMI-2	ORI AL KUMMI	04	53	33.421	+13	26	13.64	K2	III	31421A	94218					
50	3 IOT	AUR KABALINAN	04	53	43.982	+33	05	19.90	K2	III	31393A	57522					
352	10 PI -6	ORI AL TAJ V	04	55	57.260	+01	39	2C.04	K2	II	31167	112281					
297	R LEP	CRIMSON STAR	04	57	1.9-7	-14	52	47.49	C7	IV	*	31996	150058	V			
96	7 EPS	AUR ALANZ	04	58	22.530	+43	45	05.36	F6	IA	31964	39955					
47	8 ZET	AUR YAEOUS I	04	58	58.680	+41	00	17.79	L	*3.900	*	32059/9	39966				
248	65 PSI	ERI KURSI AL JAUZA-H I	04	59	0C.759	-01	14	44.98	K4	.795	B2	V	32245	13170C			
48	10 ETA	AUR YAEOUS II	05	03	00.24	+41	10	08.38	K3	V	32630	40026					
230	67 BET	ERI KURSI AL JAUZA-H II	05	05	23.365	-05	08	58.54	K2	III	33111	131794					
237	69 LAM	ERI KURSI AL JAUZA-H III	05	06	45.092	-08	43	00.32	K4	.270	82	IV	33328	131824			
389	53 PIC	KAPTEYN'S STAR	05	09	41.462	-44	59	53.25	K0	.85C	33793	217223					
52	11 MU	AUR AL-HIBA I	05	10	00.151	+38	25	38.21	K4	.860	A	33641	57755				
339	19 BEI	ORI RIGEL	05	12	07.990	-08	15	2E.65	K8	IA	34085A	131907	D				
344	13 ALP	AUR CAPELLA	05	12	53.466	+45	56	59.04	K0	.062	G9	34029AP	40186	D			
51	15 LAM	AUR AL-HIBA II	05	15	37.211	-40	03	4.71C	K0	V	34911A	40233	D				
53	21 SIG	AUR AL-HIBA III	05	21	15.060	+37	20	26.65	K4	.987	35185	57981	D				
336	34 DEL-1	ORI SAIF AL JABBAR	05	21	57.676	-02	26	29.58	L	*3.35C	*	35411AB	132071	D			
353	28 Eta	ORI BELLATRIX	05	22	26.928	+06	18	21.71	K2	III	35463	112740					
467	112 BET	ELNATH	05	23	07.710	+28	34	01.74	K7	III	35457	77168					
299	9 BET	LEP NIYAL	05	26	06.090	-20	47	52.90	K5	III	36079AB	170457	D				
336	34 DEL-1	ORI MINTAKA	05	29	27.017	-00	20	09.41	K0	.511	*	36486A	132220	D			
353	36 UPS	ORI HABIT	05	29	30.607	-07	20	12.87	K4	.61C	36512	132222					
298	11 ALP	LEP ARNEB	05	30	31.394	-17	51	24.18	F0	IB	36673A	150547	D				
354	37 PHI-1	ORI HEKA	05	32	04.419	+09	27	26.67	K4	.410	80	36822	112914				
344	39 LAM	ORI MEISSA	05	32	22.913	+C9	59	QE.35	K8	.321	08	36861/248	112921	D			
340	41 THE-1	ORI TRAPEZIUM	05	32	48.395	-05	25	16.22	N	*4.600	06	37020-34BCD	132314	D			
330	42 -C	ORI MIZAN BATIL I	05	32	55.055	-04	52	1C.72	L	*4.55C	82	III	37016AB	13232C	D		

TABLE 5 CONTINUED

## STAR NAMES AND STAR DATA ORDERED BY RIGHT ASCENSION

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RT. ASCEN. HR MIN SEC			DECLINATION DEG MIN SEC			P VISUAL MAG.	V SPECTRAL CLASS	S HENRY DRAPER CAT. NO.	SAO CAT. NO.	STAR PROP.	
			HR	MIN	SEC	DEG	MIN	SEC						
341	43	THE-2 ORI	MIZAN	BATIL	II	05	32	55.449	-05	26	50.72	+5.077	09.5V P	132321 D
342	44	IOT ORI	HATYSA			05	32	59.126	-05	56	26.26	+2.761	09 III	37C43AB
343	46	EPS ORI	ALNILAM			05	33	40.476	-01	13	56.30	+1.694	80 IA	132323 D
344	49	-D ORI	TIKA			05	34	03.415	+03	15	54.81	+4.792	KO III	37128
345	49	PHI-2 ORI	MIZAN	BATIL	III	05	36	27.836	-07	14	21.42	+4.797	A4 IV	112958
346	49	-D ORI	PHACI			05	37	50.211	-14	05	58.73	+2.63C	86 V-E	132411
347	50	ZET ORI	ALNITAK			05	38	14.043	-01	53	02.99	+1.749	09.5IB+83	196059
348	50	ZET ORI	KURSI AL JABBAR			05	42	22.653	-2	27	46.30	+3.597	F6 V	132444 D
349	53	KAP ORI	SATIPH			05	45	23.013	-09	41	05.45	+2.064	80.5IA	170759 D
350	15	DEL LEP	ARSH AL JAUAZH			05	49	10.193	-20	52	55.23	+3.78C	68 III	39364
351	163	BET COL	WAZN			05	49	11.727	-35	47	09.73	+3.110	K2 III	170925
352	58	ALP ORI	BETELGEUSE			05	52	27.8C9	+0	23	57.92	+C-BCC	M2 IAB	196240
353	34	BET AUR	MEINKALAN			05	55	51.579	+4	56	40.69	+1.900	A2 V	132711 CV
354	45	THE AUR	MAVASIN			05	56	18.627	+3	12	4C.05	+2.66C	85.5V P	40183AP
355	49	THE COL	KURUD I			06	05	48.671	-37	14	41.29	+5.010	B3	40312AB
356	164	THE COL	KURUD II			06	11	51.5C9	+2	31	23.36	+3.72C	* M3 III	58636 D
357	255	ETA GEM	PRCFUS			06	14	46.279	-35	07	22.03	+4.36C	G9 III	42167
358	165	KAP COL	KURUD II			06	18	23.546	-3	02	23.86	+3.024	B2.5V	196643
359	98	1 ZET CMA	FURUD			06	19	56.096	+2	22	37.98	+2.890	M3 III	44402
360	256	13 MU GEM	CALX			06	20	29.789	-1	55	47.23	+4.478A	78297 D	44478A
361	54	2 BET CMA	MIRZAH			06	21	02.980	+4	9	19.56.91	+4.950	* MO TAB	151428
362	46	PSI-1 AUR	DOLONES I			06	22	51.457	-5	2	40.03.45	+C.712C	FU TA	44537 D
363	112	ALP CAR	CANOFOUS			06	25	59.627	+2	14	44.06	+4.153	87 IV E	23448C
364	257	18 NU GEM	NUCATAI			06	34	49.396	+1	6	26.37.40	+1.93C	AO IV	45542AP
365	251	24 GAM GEM	AL-HENA			06	35	45.7C9	+3	9	56.51.00	+5.200	B8 III	78423 D
366	56	52 PSI-3 AUR	DOLONES II			06	35	45.7C9	+4	2	32.06.13	+4.78E	K3 III	4710 D
367	55	50 PSI-2 AUR	DOLONES III			06	39	26.746	+4	34	29.11	+5.027	K5 III	47174
368	57	55 PSI-4 AUR	DOLONES IV			06	47	13.920	+4	1	32.27	+5.027	K3 III	47914
369	253	27 EPS GEM	MEBSUTA			06	49	51.363	+2	5	10.56.92	+2.988	GB IB	48329A
370	258	31 XI GEM	AL ZIRR			06	42	28.966	+1	2	04.31	+3.353	F5 IV	78682 D
371	93	9 ALP CMA	SIRIUS			06	42	56.713	-1	6	38.46.37	C -1.957	C AI V+D A	48915AB
372	58	56 PSI-5 AUR	DCLONES V			06	43	08.206	+4	3	37.45.74	+5.75C	* GO V	48662A
373	59	57 PSI-6 AUR	DCLONES VI			06	43	50.996	+4	8	50.4C.75	+5.21C	K1 III	41330 D
374	60	58 PSI-7 AUR	DCLONES VII			06	47	13.920	+4	1	52.27	+5.027	K3 III	41346
375	61	61 PSI-8 AUR	DCLONES VIII			06	50	31.472	+3	8	34.05.87	+6.24C	B9 P	41380
376	101	16 OMI-1 CMA	UDRA			06	52	03.362	-2	3	45.32.46	+3.960	K3 IA3	50204
377	62	PSI-9 AUR	DCLONES IX			06	52	5C.489	+4	6	20.23.28	+5.75C	* GO V	50677
378	100	18 MU CMA	ISIS			06	53	49.103	-1	3	58.39.75	+4.1C5	G5 +A2	91446
379	308	16 LIN CMA	DCLONES X			06	53	58.335	+4	5	09.4C.72	+4.895	A2 V	53273 1AB
380	97	26 EPS CMA	AD-HARA			06	56	39.587	-2	8	54.1C.24	+1.500	B2 II	50973
381	102	24 OMI-2 CMA	AL ZARA			07	00	56.142	-2	3	45.32.46	+3.03C	B3 IA	52099AB
382	254	43 ZEI CMA	MEK BUDA			07	01	01.627	+2	0	33.43.45	+3.700	* F7 IB	172676 D
383	95	23 GAM CMA	MIRZA			07	01	29.713	-1	5	15.38.79	+4.1C5	B8 II	52123 D
384	96	25 OEL CMA	WEZEN			07	06	21.436	-2	6	19.45.36	+1.839	F8 IA	41463
385	252	55 DEL CMA	WASAT			07	17	08.265	+2	2	04.34.08	+3.526	FO IV	173047 D
386	99	31 ETA CMA	ALUDRA			07	22	05.972	-2	9	12.16.04	+2.440	35 IA	56986AB
387	104	3 BET CMA	GOMEIS			07	24	26.357	+0	8	23.28.99	+2.894	B8 V	5835Q
388	249	66 ALP CMA	CASTOR			07	31	22.654	+3	1	59.59.07	C +1.380	A H+A1 V	60178/3AB
389	103	10 ALP CMA	PRCCYON			07	36	41.117	+0	5	21.16.81	+C.357	F5 IV-V	61421AB
390	399	-K-1 PUP MERKEB (A)	MERKEB (B)			07	36	46.323	-2	6	41.12.59	+4.309	S B8	115756 D
391	400	-K-2 PUP MERKEB (B)				07	36	46.820	-2	6	41.19.88	+4.629	S B3	174198 D

TABLE 5 CONTINUED  
STAR NAMES AND STAR DATA ORDERED BY RIGHT ASCENSION

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RIGHT ASCEN. HR MIN SEC			DECLINATION DEG MIN SEC			VISUAL MAG.	SPECTRAL CLASS	HENRY DRAPER CAT. NO.		SAO* CAT. NO.	STAR PROP.		
			0	7	42	0	28	55.11			62509A	79666				
250	78 BET	SEM	POLLUX	07	42	15.517	*28	08	55.11	K0	III	62509A	79666	D		
402	7 XI	PUP	AZIDISKE	07	47	11.421	-29	43	55.22	G3	IB	62700AB	174601	C		
401	2 ET	VEL	NAOS	08	01	19.555	-39	51	40.83	F	5	66811	198752			
522	6 AM-2	CNC	RESOR	08	07	59.465	-47	11	18.31	*1.833	07	68273A	219504	C		
83	16 ZE1-1	CNC	TEGINE (AB)	08	09	20.753	*17	47	59.93	L	*5.050	69256/7AB	97645	C		
84	16 ZE1-2	CNC	TEGMINE (C)	08	09	21.213	*11	47	58.38	L	*6.2CC	6925EC	97646	C		
79	17 BET	CNC	AL TARF	08	13	48.282	*09	20	27.73	*3.523	K4	III	69267	116569	D	
87	19 LAM	CNC	PIAVIOS	08	17	33.952	*24	10	52.39	*5.31C	*	89	V	70011	80113	
309	31 LYN	CAR	SHAUKAH	08	19	25.154	*43	21	00.83	*4.245	K5	III	70272	42319		
114	EPS	CAR	ANICR	08	21	29.383	-59	20	52.98	*1.88C	K0	II+B	71125/0	235932	D	
504	1 OMI	UMA	MUSCIOA	08	26	07.631	*60	53	14.56	*3.347	G5	III	71369A	14573	D	
983	2 A	UMA	ALTHIBA I	08	30	08.936	*65	19	03.83	*5.46	A	M	72037	14590		
505	3 PI -1	UMA	ALTHIBA II	08	34	06.703	*65	11	94.92	*5.625	GO	V	72905	14609		
272	4 DEL	HYA	MINAZAL I	08	35	00.594	*15	52	45.60	*4.143	A0	V	73262	116965		
506	4 PI -2	UMA	ALTHIBA III	08	35	51.956	*64	30	16.82	*4.593	K2	III	73108	14616		
279	5 SIG	HYA	MINKALSHUJA	08	36	08.671	*03	31	05.48	*4.035	K2	III	73471	116988		
82	41 EPS	CNC	ALMALAF	08	37	35.068	*19	93	23.07	*6.300	A6	III	73731	98024		
80	43 EAM	CNC	ASCELLUS BOREALIS	08	40	23.762	*21	39	58.82	*4.67C	A1	V	74198	80378		
275	7 ETA	HYA	MINAZAL II	08	40	36.698	*03	34	45.66	*4.289	B3	V	74280	117050		
81	47 DEL	CNC	ASCELLUS AUSTRALIS	08	41	50.747	*18	20	21.83	*3.325	K0	III	74442	98087	D	
85	48 101-1	CNC	ZUBANAH (B)	08	43	33.685	*28	56	57.95	*6.570	A3	M	74739A	80416	D	
86	48 101-2	CNC	ZUBANAH (A)	08	43	40.514	*20	56	39.19	*4.03C	GB	II	74739A	80416	D	
273	11 EPS	HYA	MINAZAL III	08	44	07.755	*06	36	12.41	L	*3.365	GD	III+ <sup>F</sup> 7	74974ABC	117112	
278	13 RHO	HYA	MINAZAL IV	08	45	97.115	*06	01	25.07	*4.347	A0	V	75137AB	117146	C	
274	16 ZET	HYA	MINAZAL V	08	52	45.092	*06	03	13.25	*3.019	G8	III	76294	117264		
78	65 ALP	CNC	ACUDENS	08	55	45.247	*02	03	05.07	*4.228	A	M	76756	98267	D	
498	9 IOT	UMA	TALITHA	08	55	47.626	*48	14	22.05	*3.146	A7	V	76644A	42630	D	
507	8 RHO	UMA	ALTHIBA IV	08	58	03.573	*67	49	35.21	*4.757	M3	IIIB	76827	14742		
499	12 KAP	UMA	KAFZANIA	09	00	13.266	*47	21	20.79	L	*3.572	AD	77327AB	42661	D	
508	11 SIG-1	UMA	ALTHIBA V	09	04	01.898	*61	04	33.26	*5.147	K5	III	77800	14769		
486	15 -F	UMA	ALHAUD I	09	05	21.316	*51	48	28.27	*4.467	A	H	78209	27136		
509	13 SIG-2	UMA	ALTHIBA VI	09	06	01.131	*61	20	21.62	C	*4.79E	F7	78154AB	14786	D	
524	24 LAM	VEL	SU4AIL	09	09	0.310	-43	13	47.60	*2.240	K5	IB	78647AB	220878	D	
88	77 XI	CNC	NA4N	09	06	29.235	*22	14	55.95	*5.14C	KG	II	78515	80666		
510	19 TAU	AL HAUD	II	09	06	49.121	*63	43	07.22	*4.668	A7	M	78362/3A	14796	D	
495	16 -E	UMA	ALHAUD III	09	12	36.226	*54	13	47.19	*4.818	A5	V	79439	27191		
113	113 BET	CAR	MIPLOACIOUS	09	12	39.662	-69	30	39.63	*1.679	AO	III	80007	250495		
115	101 CAR	CAR	ASPIDIKE	09	15	45.1C9	-53	03	53.70	*2.248	FO	IV	80404	236808		
523	KAP	VEL	MARKER	09	20	33.053	-54	47	47.30	*2.493	S2	IV	81198	236891		
292	1 KAP	LEO	MINKARA SAD	09	21	4.777	*26	23	55.32	*4.46C	K2	III	81146AB	80807	D	
271	30 ALP	HYA	ALPHARD	09	25	07.791	-08	26	27.47	*1.981	K3	III	81797	136971		
280	31 TAU-1	HYA	UKDA-I	09	26	36.618	-02	32	58.04	*4.587	F6	IV	81997A	136895		
498	23 -H	UMA	ALHAUD IV	09	27	36.565	*63	16	55.11	*3.656	FO	IV	81937A	14908	D	
293	4 LAM	LEO	ALTERF	09	28	52.248	*23	11	22.21	*4.31C	K5	III	82309	80885		
281	32 TAU-2	HYA	UKDA-I	09	29	25.987	-00	57	47.98	*4.559	A3	III	82446	136932		
497	25 THE	UMA	ALHAUD V	09	29	31.489	*51	54	23.18	*3.177	F6	IV	82326AB	27289	D	
494	24 -D	UMA	ALTHIBA VII	09	30	0.939	*20	03	06.47	*4.552	G2	IV	82210	6897		
270	33 A	HYA	UKDA-II	09	32	02.913	-05	41	26.92	*5.55C	GK1	IV	82870	136964		
276	35 IOT	HYA	UKDA-IV	09	37	18.152	-00	54	53.79	*3.983	K3	III	83618	137035		
277	36 KAP	HYA	AL SHARASIF I	09	37	54.469	-14	06	16.63	*5.055	B5	V	83754	155388		

TABLE 5 CONTINUED

## STAR NAMES AND STAR DATA ORDERED BY RIGHT ASCENSION

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RT. ASCEN. HR MIN SEC	DECLINATION DEG MIN SEC	P VISUAL MAG.	V SPECTRAL CLASS	N HENRY DRAPER CAT. NO.	SAO* CAT. NO.	STAR PROP.	
295	14 QMI	LEO SUBRA	09 18 29.008	+10 07 14.64	+3.480	A2 *F6 II	83308/3A	98709	D	
288	17 EPS	LEO ALGENUBI	09 43 00.996	+29 00 19.62	+2.97C	G0 II	84441	61004		
511	29 UPS	UMA AL-JAU'D VI	09 47 27.102	+59 16 30.31	+3.794	F2 IV	849994AB	27401	D	
512	30 PHI	UMA AL-JAU'D VII	09 48 43.542	+54 17 36.59	+4.573	A3 S	85235AB	27408	D	
294	24 MU	LEO RASALAS	09 49 55.434	+26 14 36.08	+3.890	K2 III	85503	81064		
290	30 ETA	AL JAB-4AH	10 04 36.533	+17 00 26.17	+3.53C	A0 IB	87737	98955		
283	32 ALP	REGULUS	10 05 42.647	+12 12 44.54	+1.351	B7 V	87901A	89867	D	
289	36 ZET	LEO AD-AFFERA	10 13 54.758	+23 40 01.94	+3.435	F0 III	89265	81265		
500	33 LAM	UMA TANIA BOREALIS	10 14 05.353	+43 09 53.54	+3.435	A2 IV	89021	43268		
285	41 GAM-1	LEO ALGIEBA (A)	10 17 13.120	+20 05 42.86	+2.289	S	K0 III	89484A	81298	D
286	41 GAM-2	LEO ALGIEBA (B)	10 17 13.401	+20 05 39.69	+3.479	S	G7 III	89485B	81299	D
501	34 MU	UMA TANIA AUSTRALIS	10 19 21.469	+40 45 06.25	+3.03C	MO III	89758	43310		
296	0 MI	LMI PRAECIPIUA	10 50 31.231	+34 29 05.62	+3.903	K0 III-IV	94264	62297		
179	7 ALP	CRT ALKES	10 57 20.138	+18 01 55.62	+4.066	K0 III	95272	156375		
490	98 BET	UMA MERAK	10 58 50.251	+56 39 03.12	+2.377	A1 V	95418	27876		
489	50 ALP	UMA DUBHE	11 00 39.570	+62 01 16.80	+1.753	K0 III	95689AB	15384	D	
180	11 BET	CRT AL SHARASIF II	11 09 11.730	-22 33 08.99	+4.467	A2 III-IV	97277	179624		
287	68 DEL	LEO ZOSMA	11 11 27.685	+20 47 52.67	+2.563	A4 V	97603	81727		
291	70 THE	LEO CERTRAN	11 11 37.066	+15 42 11.38	+3.343	A2 V	97633	99512		
282	72 LEO	ZUBRAH	11 12 32.837	+23 22 05.98	+4.625	M3 III	97778	81736		
503	53 XI	ALULA AUSTRALIS	11 15 31.162	+31 49 38.89	C	+3.903	99230/1AB	15384	D	
502	54 NU	ALULA BOREALIS	11 15 46.947	+33 22 02.62	+3.665	G0 V	99230/1AB	179624		
212	1 LAM	GIASU AR	11 28 27.546	+63 36 26.09	+3.827	MO III	99265	62486	D	
513	63 CHI	UMA ALKAZZA <sup>4</sup>	11 43 25.030	+48 03 24.16	+3.713	K0 III	100029	15532		
284	94 BET	LEO DENEBOA	11 46 30.605	+14 51 05.80	+2.131	A3 V	102224	43886		
526	5 BEI	VIR ZAVIJAVA	11 48 05.387	+02 02 47.61	+3.61B	F8 V	102870	99809	D	
482	1 UMA	FLYING STAR	11 50 06.169	+38 04 39.16	+6.453	G8 V P	103095	62738		
491	64 GAM	UMA PHECCA	11 51 12.566	+53 59 21.98	+2.413	A0 V	103287	21879		
174	1 ALP	CRY ALC-413A	12 05 49.746	-24 27 00.13	+4.030	F2 V	104542	180505		
178	2 EPS	CRY MINKAR	12 07 32.919	-22 20 30.12	+2.993	K3 III	105701	180531		
492	69 DEL	UMA MEGREZ	12 12 57.584	+57 18 36.95	+3.310	A3 V	106591	28315		
176	4 GAM	CRV GIEGH	12 13 13.843	-13 15 51.84	+2.589	B8 III	106625	157176		
531	15 ETA	VIR ZANIA <sup>4</sup>	12 17 20.761	-00 23 20.20	+2.413	A2 V	107721	138721		
181	ALP-1	CRU ACRUX (A)	12 23 98.059	-62 49 15.43	+1.312	S BI IV	108248A	251904	D	
182	ALP-2	CRU ACRUX (B)	12 23 98.695	-62 49 22.28	B	+1.923	S B3 III	109249B		
168	15 GAM	COM AL DAFFIRAH	12 24 26.870	+28 32 46.07	+4.353	K1 III-IV	109381	82313		
177	7 DEL	CRV ALGORIB	12 27 16.380	-16 14 14.4	+2.349	B9 V	109767A	157323	D	
184	6 GAM	CRU GACRUX	12 28 22.722	-56 50 00.33	+1.66C	M3 III	1099034	240019		
166	21 UU	COM KISSIN	12 29 30.930	+24 50 35.98	+5.455	A3 P	108945	82346		
493	77 EPS	UMA ALIOTH	12 31 50.084	+56 13 51.14	+1.790	AO P	109358	44230		
528	43 DEL	VIR MINELAUVA	12 31 45.342	-23 07 13.60	+2.666	SS III	109379	180915		
90	12 GAM	CEH MU-LIFAIN	12 38 44.898	-48 41 07.32	+2.157	AO III	110304AB	223603	D	
527	29 GAM	PORRIMA	12 39 07.452	-01 10 31.58	C	+2.745	FO V	110379/QAB	138917	D
183	18 BET	CRU KIMOSA	12 49 47.737	-53 24 56.53	+1.265	BD .5IV	111123	240259		
175	9 BET	CRV KRAZ	12 53 04.986	+03 40 07.60	+3.368	M3 III	11230	119674		
125	12 GAM	CRV COR CAROLI (B)	12 53 40.203	+39 35 03.82	+5.610	FO V	1124128	63256	D	
127	12 ALP-1	CRV COR CAROLI (A)	12 53 41.478	+38 35 16.82	+2.882	AQ P	1124134	63257	D	
529	47 EPS	VINDENFAIRIX	12 59 41.210	+11 13 38.90	+2.829	S9 III	113226	100384		
69	CVN LA SUPERBA		13 E3 37.463	+45 32 07.73	+5.6CC	K1 III	113847	44465	C	

TABLE 5 CONTINUED

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RT. ASCEN.			DECLINATION			P SEC	VISUAL MAG.	SPECTRAL CLASS	S N	HENRY DRAPER (HD) CAT. NO.	SAO* CAT-NC.	STAR PROP.
			HR	MIN	SEC	DEG	MIN	SEC							
167	42 ALP	COM	13	07	33.321	+17	47	36.25	L	+4.313	F5	V	114378/9AB	100443	D
494	79 ZET-1	UMA MIZAR (A)	13	21	54.916	+55	11	09.46	A2	+2.707	116656A	28737	C		
495	79 ZET-2	UMA MIZAR (B)	13	21	55.908	+55	10	56.3	A2	+3.950	116657B	28738	D		
525	67 ALP	VIR SPICA	13	22	33.301	-10	54	03.36	B1	+C.969	116658	157923			
487	80 -G	UMA ALCOR	13	23	13.477	+55	14	52.99	A5	+4.003	116842	28751			
530	79 ZET	VIR HEZE	13	32	08.559	-00	20	27.51	A3	+3.363	118098	139420			
496	85 ETA	UMA ALKAID	13	45	34.294	+49	33	44.13	+1.980	83	V	120315	44752		
69	8 ETA	BOO MUP-HRIDO	13	52	18.168	+18	38	51.35	+2.676	80	FV	121370	1C0766		
126	ZET	CEN BATEN KENTAUROS	13	52	24.510	-47	02	34.87	+2.540	82	IV	121263	224538		
124	BET	CEN HADAR	14	00	16.510	-60	07	58.09	+0.61C	B1	II	122451	252582		
204	11 ALP	DRA T-03AN	14	03	01.363	+64	36	51.57	+3.652	A0	III	123299	16273		
127	5 THE	CEN MENKENI	14	03	43.877	-16	07	25.64	+2.075	K0	III	123139	2C5188		
533	98 KAP	VIR ALGAFAR I	14	10	13.451	-10	02	30.80	+4.183	K3	III	124294	158427		
72	17 KAP-1	BOO TERTIUS ASELLUS (B)	14	11	40.271	+52	01	15.47	+6.658	F2	V	124674B	29045	C	
73	17 KAP-2	BOO TERTIUS ASELLUS (A)	14	11	41.519	+52	01	23.55	+4.530	A7	IV	124675A	29046	D	
64	16 ALP	BOO ARCTURUS	14	13	22.750	+19	26	30.95	+2.C5C	K2	III P	124889	110944		
532	99 IOT	VIR SYRMA	14	13	23.345	-05	45	46.19	+4.077	F7	IV	124850	139824		
71	21 IOT	BOO SECUNDUS ASELLUS	14	14	21.673	+51	35	49.93	+4.75C	A3	V	1211614	29071	D	
74	19 LAM	BOO AULAD ALT-YIBA	14	14	28.969	+46	19	01.94	+4.179	AU	P	125162	44965		
534	100 LAM	VIR KAMBALIA	14	16	21.969	-13	00	30.89	+0.522	A8	M	125337	158489		
70	23 THE	BOO PRIMUS ASELLUS	14	23	29.610	+52	04	52.32	+4.045	F7	V	126660	29137		
536	105 PHI	VIR ALGAFAR II	14	25	37.362	-02	00	17.26	+4.956	G2	III	126668AB	139951	D	
66	27 GAM	BOO SEGINUS	14	30	03.837	+38	31	34.12	+3.036	A7	III	121762	64203	D	
123	12 ALP	CEN RISIL KENTAUROS	14	36	11.253	-60	37	4E.89	C	+C.559	G2	V+OK1	* 1262838	C	
535	107 MU	VIR RISIL LAWNA	14	40	25.283	-05	26	3D.92	+3.893	F3	IV	129502	140090	D	
68	36 EPS	BOO IZAR	14	42	46.137	+27	17	02.66	+2.373	A2	V+K0II	* 125988/SAB	83500	O	
63	38 -H	BOO MERGA	14	47	31.671	+46	19	25.55	+5.710	* DF4	* 130945	* 45226			
302	8 ALP-1	LIB ZUBENELEGNUMBI I	14	47	54.959	-15	47	25.90	+5.152	F5	IV-V	130198	168836	D	
303	9 ALP-2	LIB ZUBENELEGNUMBI II	14	48	06.447	-14	03	51.09	+5.152	A3	V	130491A	158880	D	
515	7 BET	UMI KOCHAB	14	50	49.645	+74	21	35.58	+2.C13	K4	III	131813	8102		
65	42 BET	NEKKAR	15	00	03.664	+40	35	12.80	+3.089	G8	III	133208	45337		
307	20 SIG	LIB ZUBEN ACRABI	15	01	08.247	-25	05	12.27	+3.318	M4	III	133216	183139		
77	43 PSI	BOO AULAD ALNAT-LAT	15	02	18.094	+27	08	29.75	+4.953	K2	III	133512	83645		
306	21 MU	LIB ZUBEN HAKRABI	15	03	49.929	-16	03	51.09	+5.29C	K5	III	133714	159028	D	
67	49 DEL	BOO THIBA	15	13	29.117	+33	30	01.20	+3.079	G8	III	135124	64589	D	
304	27 BET	LIB ZUBENE SCHAMALI	15	14	18.732	-09	11	56.93	+2.612	B8	V	135742	140430		
516	11 GAM-1	UMI PERKAD MINOR	15	17	07.110	+72	00	19.09	+5.020	K4	III	136726	8207		
517	13 GAM-2	UMI PERKAD MAJOR	15	20	47.167	+42	00	42.97	+3.043	A3	III-III	137422	.82220		
75	51 MU-1	BOO ALKALUROPS	15	22	35.925	+37	33	05.49	+4.005	FO	V	137351A	64686	D	
211	12 IOT	DRA EDASICH	15	23	48.741	+59	08	26.16	+3.296	K2	III	137759	2352C		
173	3 BET	CRB NUSA-KAN	15	25	45.944	+29	16	37.26	+3.058	FO	III	137939	83831		
452	13 DEL-1	SCP NASAK YAMANI I (B)	15	32	24.633	+10	42	12.66	+5.019	S	FO	138917B	1C1623	O	
453	13 DEL-2	SCP NASAK YAMANI I (A)	15	32	24.681	+10	42	17.82	+4.179	S	FO	138918A	101624	O	
172	5 ALP	CRB ALPECACA	15	32	34.445	+26	52	54.75	+2.21C	A0	V	139006	83893		
211	12 IOT	DRA EDASICH	15	36	01.742	+40	30	55.0	+5.240	G8	III-IV	136491	45643		
173	3 BET	CRB NUSA-KAN	15	41	48.151	-15	20	52.3	+5.005	FO	III	140417	15966		
443	24 ALP	CRB UNUKAL YAI	15	41	48.151	-06	34	53.93	+2.805	K2	III	140517A	121157	O	
450	28 BET	CRB NASAK SHAMIYA I	15	43	52.610	+15	34	37.42	+3.672	A2	IV	141003A	1C175	O	
520	16 ZET	UMI AKFA FARKADA IN	15	45	47.812	+77	56	57.09	+4.303	A3	V	142105	8328		
170	R	CRB VARIABILIS CORONAE	15	46	30.695	+28	18	32.24	+5.81C	F	PEP	* 141527	84015	V	

TABLE 5 CONTINUED

## STAR NAMES AND STAR DATA ORDERED BY RIGHT ASCENSION

NUMBER	STAR DESIGNATION	STAR PROPER NAME	PROPER NAME	RT. ASCEN.			DECLINATION			P. VISUAL			S. VISUAL			HENRY DRAPER CAT. NO.			SAO* CAT. NO.	STAR PROP.
				-R	MIN	SEC	DEG	MIN	SEC	N	MAG.	N	S	N	MAG.	N	MAG.			
454	37 EPS	SCP	NASAK YAMANI II	15 48	19.243	*04 37	36.95	+3.703	A M	141795	121218							183957	C	
453	5 RHO	SCC	ICIL	15 53	47.507	-29 04	10.42	+3.983	B2 V	142669A								101826		
451	41 GAM	SCC	NASAK SHAMIYA II	15 54	08.455	*15 49	24.77	+3.941	F6 V	142960								183987	D	
450	6 PI	SCO	OSC-UHBB	15 55	49.31	-25 58	16.14	+2.857	B1 V	143018ABC								184014		
449	7 DEL	CRB	BLAZE STAR	15 57	22.318	-22 28	51.37	+2.300	B0 V	143275								84129	N	
448	XI -1	SCO	GRASSIAS (A)	16 01	36.889	-11 14	12.28	+2.026	*PEC	*	143454							144069/0AB		
447	XI -2	SSC	GRASSIAS (B)	16 01	37.342	-11 14	08.07	+4.160	FS IV	144217AB							159665	D		
446	8 BET-1	SCO	GRAFFIAS (AB)	16 02	31.507	-19 40	12.45	+2.629	DSV	144218C							159682	D		
445	8 BET-2	SCO	GRAFFIAS (C)	16 02	31.852	-19 40	06.07	+4.932	B2 V	144470							159683	D		
444	9 OME-1	SCO	JAB-JAT ACRABI I	16 03	52.659	-20 32	07.11	+3.363	B1 V	144608							184123			
443	10 OME-2	SCO	JAB-JAT ACRABI II	16 04	28.691	-20 44	06.53	+4.312	GG2	144715A							184135			
442	7 KAP-1	HER	MARSIC	16 05	48.389	*17 10	43.81	+5.000	GB III	145001A							101951	D		
441	NU -1	SCO	JABRAY (B)	16 05	03.549	-19 19	17.45	L	6.263	AO	145501CC							159763	D	
440	NU -2	SCO	JABBA-(A)	16 09	05.091	-19 19	56.20	L	+4.012	B2 V	145502AB							159764	D	
439	1 DEL	OPH	YED PRICR	16 11	43.325	-03 34	01.41	+2.727	M1 III	146051							141052			
438	2 EPS	OPH	YED POSTERIOR	16 15	40.348	-04 34	19.57	+3.233	S9 III	146791							141086			
437	20 SIG	SCO	ALNIVAT I	16 18	08.667	-25 28	28.14	+2.882	B1 III	147165A							184336	D		
436	21 ETA	UMI	ANNA FARKADAIN	16 19	56.289	+75 52	16.64	+4.337	DAB	148048							8470			
435	20 GAM	HER	NASAK SHAMIYA III	16 19	42.737	+19 16	09.32	+3.745	A9 III	147547A							162107	D		
434	24 OME	HER	CUJAH	16 23	06.363	+14 09	49.24	+4.590	AO P	148112A							102153	D		
433	14 ETA	DRA	DUIBAIN	16 23	18.476	+61 37	37.10	+2.730	G8 III	148397AB							17074	D		
432	42 ALP	SCO	ANTARES	16 26	20.206	-26 19	21.95	C	+1.080	M1 IB	148415							184415	D	
431	27 BET	HER	KORNEF+CROS	16 28	04.105	+21 35	5C.16	+2.783	GB III	148856							84411	D		
430	10 LAM	OPH	MARFIK	16 28	23.341	+02 05	31.06	C	+3.910	AI V	148857AB							121658	D	
429	23 TAU	SCO	ALNIVAT II	16 32	45.916	-28 06	5C.56	+2.832	B0 V	1489481							184481			
428	13 ZET	OPH	SAIK	16 34	24.137	-10 28	02.81	+2.567	09.5 V	149757							160006			
427	21 ALP	TRA	AIRIA	16 43	21.059	-68 56	13.89	+1.935	K4 III	150798							253700			
426	436 NU -1	SCO	TALI AL SHAULAH I	16 48	28.679	-37 57	48.92	+3.140	*31.5V	151890							208102			
425	22 ZET	DRA	D-IBAH	17 08	38.146	+65 46	33.99	+3.177	B6 III	151985							208116			
424	64 ALP-1	HER	RASALGETHI (A)	17 12	21.348	+14 26	45.34	+3.194	S	152751A							152759	D		
423	22 EPS	UMI	CIRCIORES	17 17	04.137	+04 32	07.35	L	+4.280	*55 III	154905/EB							160332	D	
422	21 MU	DRA	ALRAKIS	17 07	30.461	-15 39	52.89	L	+2.430	A2.5V	155125AB							17365		
421	35 ETA	OPH	SABIK	17 18	00.251	-21 03	35.72	+4.357	F2 V	155763							173680	D		
420	209	DRA	LESATH	17 18	56.157	-24 57	50.20	+3.177	B2 IV	156014A							102680	D		
419	22 BET	OPH	GARAFSA	17 27	51.662	-31 15	26.57	+2.785	B3 IV	156015B							102680	D		
418	446 UPS	SCO	LESATH	17 27	51.662	-31 15	26.57	+2.785	B3 IV	156016B							102680	D		
417	76 LAM	HER	HASTHM	17 29	42.947	+26 09	49.49	+4.400	K4 III	158899							85163			
416	23 BET	DRA	RASHABA	17 29	18.000	+52 20	15.65	+5.477	S	159181AB							30429	C		
415	35 LAM	SCO	SHAVLA	17 30	59.555	+24 53	49.79	+3.140	A3 IV	159164A							84951	D		
414	24 NU -1	DRA	ALWAID (B)	17 31	11.293	+55 13	04.07	+4.98C	A M	159897AB							185296	D		
413	25 NU -2	DRA	ALWAID (A)	17 31	16.719	+55 12	22.92	+4.377	A M	159560A							30450	D		
412	203	-F	DRA	ADAFR ALDIB I	17 32	09.543	+63 10	01.20	+5.66C	KO III	159966							17526		
411	320	55 ALP	RASAL-HAGUE	17 32	36.696	+02 35	41.92	+2.072	A5	159561							102932			
410	431	THE	SARGAS	17 33	93.371	-42 58	05.15	+1.66C	F0	159532							228201			
409	226	28 OME	DRA	ADAFR ALDIB II	17 37	14.349	+68 46	52.49	+4.900	F5 V	160922							17576		
408	434 KAP	KAP	MULA	17 39	01.548	-19 00	22.76	+2.41C	S2 IV	160578							209163			

TABLE 5 CONTINUED

TITLES NAMES AND SURNAMES ORDERED BY SIGHT ASCENSION

STAR NUMBER	DESIGNATION	STAR PROPER NAME	RI. ASCEN. HR MIN SEC			DECLINATION DEG MIN SEC			VISUAL MAG.			SPECTRAL CLASS			HENRY DRAPER N (HD) CAT. NO.			SAO* CAT. NO.			STAR PROP.
			DEG	MIN	SEC	DEG	MIN	SEC	N	V	M	A	B	C	D	E	F	G	H	I	
321	60 BET	OPH	17	41	00.041	+04	35	11.84	+2	771	K2	III	F5	IV-V	161036	122671	8890	C			
224	31 PSI-1	DRA	17	42	49.282	+72	10	26.21	+4	524			F8	V	162003A	1620043	8891	D			
225	31 PSI-2	DRA	17	42	50.929	+72	10	55.39	+5	805			A0		161693	30538	161693				
202		DRA	17	42	56.440	+53	49	15.34	+5	73C	*		F2	I4	161471A	228420	161471A				
432	10T-1	SCO	17	44	05.100	-40	06	34.95	+3	028			A0	V	161868	122754	161868				
322	62 GAM	OPH	17	45	23.019	+02	43	28.28	+3	738			CA3		161912A	228466	161912A				
433	101-2	SCO	17	46	41.171	-40	06	35.09	+4	800			BB	IA-P	166205	2937	166205				
518	23 DEL	UM1	17	48	18.338	+86	36	34.78	+3	347	A1	V	M3	II	163588	30631	163588				
216	32 XI	DRA	17	52	39.700	+56	52	47.68	+3	737	K2	III	K5	III	169058AB	30653	169058AB				
206	33 GAM	DRA	17	55	26.576	+51	29	38.53	+2	231	K0	III	K0	III	169062AA	209696	169062AA				
410	10 GAM	SGR	18	02	35.678	-30	25	35.80	+2	990			AO	P	165937AB	9084	165937AB				
416	13 MU	SGR	18	10	96.328	-21	08	25.46	+3	866	*		BB	IA-P	168497	0	168497				
419	ETJ	SGR	18	14	14.573	-36	46	43.49	+3	113	M3	II	K2	III	167618AB	209957	167618AB				
411	19 DEL	SGR	18	17	42.556	-29	51	04.68	+2	695			AD	V	168454A	186681	168454A				
412	20 EPS	SGR	18	20	51.189	-34	24	36.94	+1	935	B9	IV	169022AA	210091	169022AA						
222	43 PHI	DRA	18	21	48.231	+71	18	42.23	L	44.21C	AO	P	170084AB	9084	170084AB						
223	44 CHI	DRA	18	21	57.490	+72	42	42.15	+3	563	F7	V	170153	9087	170153						
319	2 MU	LVR	18	22	34.868	+33	28	43.85	+5	11C	A3	III	169702	66943	169702						
415	22 LAM	SGR	18	24	53.059	-25	27	04.19	+2	830	K2	III	169916	186841	169916						
310	3 ALP	LVR	18	35	14.655	+38	44	09.68	+0	044	AD	V	171673A	67174	171673A						
422	27 PHI	SGR	19	42	9.962	-22	02	38.48	+3	177	B9	III	173300	187239	173300						
313	4 EPS-1	LVR	19	42	40.865	+39	37	03.40	+6	0C1	S	A4	173583A	67309	173583A						
314	4 EPS-1	LVR	18	42	40.873	+39	37	00.09	+5	040	S	A2	173582B	67310	173582B						
315	5 EPS-2	LVR	18	42	43.325	+39	33	33.99	L	5	595	A3	*A5	173617C	67315	173617C					
316	6 ZET-1	LVR	19	03	02.913	-32	33	06.28	+4	347	A	M	173648A	67322	173648A						
317	7 ZET-2	LVR	18	43	04.779	+37	32	28.33	+5	73C	FO	IV	173649D	67324	173649D						
311	10 BET-1	LVR	18	48	13.935	+33	19	12.51	+3	400	*	B	PE	* 174638/9A	67451	174638/9A					
417	32 NU-1	SGR	18	51	09.664	-22	48	29.54	+4	82C	CK2		174974AB	187426	174974AB						
418	35 NU-2	SGR	18	52	05.766	-22	44	08.19	+4	990	K3	III	175190	187448	175190						
420	34 SIG	SGR	18	52	09.927	-26	21	38.29	+2	063	B2	V	175638A	124068	175638A						
455	63 THE-1	SCA	18	53	43.976	+04	08	13.25	+4	622	AS	V	175639B	12407C	175639B						
456	63 THE-2	SCA	18	53	45.420	+04	08	01.70	+4	4.315	AS	N	176524	9283	176524						
221	52 UMS	AQL	18	55	09.617	+71	13	50.82	+4	810	KD	III	176437A	67663	176437A						
312	14 GAM	LVR	18	57	04.294	-32	37	11.26	+3	25C	B9	III	176411	104318	176411						
24	13 EPS	AQL	18	57	21.118	+14	59	56.41	+4	020	K2	III	176687AB	18760C	176687AB						
413	38 ZET	SGR	18	59	25.892	-23	57	12.79	L	6CC	A2	III	177174	104461	177174						
25	17 ZET	AQL	19	03	06.647	+13	47	15.86	+2	969	B9	V	177756	143021	177756						
29	16 LAM	AQL	19	03	35.688	-04	57	32.74	+3	433	BB	V	177756	187716	177756						
421	40 TAU	SGR	19	03	49.160	-27	44	43.14	+3	315	K1	III	178222	31537	178222						
169	41 PI	CRA	19	06	04.395	-37	59	03.99	+4	1CC	A2	N	178253	104318	178253						
419	42 PSI	SGR	19	06	47.450	-21	06	17.49	L	2.994	F2	II-III	178253	9356	178253						
408	43 BET-1	LVR	19	06	12.309	+33	03	32.09	+4	383	B2	IV	180163A	187756	180163A						
409	42 BET-2	SGR	19	12	28.542	-25	20	40.59	L	4.850	DFS		179950AB	187882	179950AB						
217	58 PI	DRA	19	12	32.828	+62	34	25.03	+3	067	G9	III	180711	18222	180711						
407	50 PI	SGR	19	15	56.786	+53	16	31.89	+3	773	KU	III	181276	9356	181276						
420	44 PI	DRA	19	16	31.472	+73	15	47.87	+4	455	K3	III	181584	9356	181584						
409	45 BET-1	SGR	19	19	02.916	-44	33	17.72	+4	010	B8	V N	181454A	229646	181454A						
217	58 PI	DRA	19	19	36.611	-44	53	44.93	+4	28C	FO	III	181623	229654	181623						
19	20	24.996	+65	37	05.16	+4	593	+4	28C	A2	IV	181869	182299	181869							
19	20	42.492	-40	42	43.10	-3	3.96C	-3	96C	FO	III	N	181869	229654	181869						

TABLE 5 CONTINUED  
STAR NAMES AND STAR DATA ORDERED BY RIGHT ASCENSION

NUMBER	STAR DESIGNATION	PROPER NAME	RT. ASCEN.			DECLINATION			P			VISUAL			SPECTRAL			HENRY DRAPER CAT. NO.			SAO* CAT. NO.			STAR PROP.				
			HR	MIN	SEC	DEG	MIN	SEC	P	VISUAL	MAG.	V	SPECTRAL	N	C	CLASS	S	N	C	W	N	G	S	N	C			
423	47	CHI-1 SGR	NAMALSAIDI-1 III	19	22	14.012	-24	36	26.63	+5.020	DAS	182369AB	188101	D														
424	49	CHI-2 SGR	NAMALSAIDI-1 IV	19	22	28.163	-24	03	43.16	+5.42C	K4	182416	188105															
23	30	DEL	AQL	19	22	58.597	+03	00	48.98	+3-356	F0	182640	124603															
537	6	ALP	VUL	19	26	37.910	+24	33	44.90	+4.42C	MD	183435	87261															
6	ALP	VUL	ANSER	19	28	42.222	+27	51	12.44	+3.80D	K5	183912/3A	87301	D														
187	6	BET-1 CYG	ALBIRO (A)	19	28	44.3C2	+27	51	32.69	+5.11C	BB	183918	87302	D														
188	6	BET-2 CYG	ALBIRO (B)	19	32	27.585	+69	34	34.11	+4.60E	KD	185144	18396															
219	61	SIG	DRA	19	34	55.656	-01	23	55.88	+4.35C	B5	185130	145597	D														
28	41	101 AQL	AL THALIMAIN II	19	37	51.612	+17	53	51.21	+4.353	GD	185738	105120	D														
403	5	ALP	SCE	19	43	24.671	+45	00	28.23	C	+2-B1C	B9.51II	48796	D														
190	18	DEL	CYG	19	43	52.907	+10	29	24.38	+2.717	K3	186791	105223															
22	50	GAM	AQL	19	48	2C.519	+08	44	05.71	+C.753	A7	187612	125122	D														
20	53	ALP	AQL	19	48	21.063	+70	09	26.55	+3.933	G8	188119AB	95940	D														
208	63	EPS	DRA	19	49	55.525	+00	52	33.23	+3.356	F6	187929	125159	V														
26	55	ETA AQL	ALMIZAN II	19	52	46.744	-26	26	01.47	+4.700	DGS	188376	188722															
426	58	OME	SGR	TEREBELLUM I	19	52	51.383	+06	16	45.04	+3.714	GB	188512	125235	D													
21	60	BET	AQL	19	52	51.375	-27	18	14.61	+4.520	KG3	188603	188742															
405	59	-B	SGR	TEREBELLUM II	19	53	52.875	-22	18	14.61	+4.82C	GG5	189005	188778														
404	60	A	SGR	TEREBELLUM III	19	55	54.576	-26	19	57.29	+4.82C	M4	189763	188844														
406	62	-C	SGR	TEREBELLUM IV	19	59	35.183	-27	51	01.64	+4.503	GD	190940	186716														
218	67	RHO DRA	TAIIS II	20	02	35.527	+67	43	51.21	+4.513	K3	1944150	144150															
27	65	THE	AQL	ALMIZAN III	20	08	43.493	-00	58	16.06	+3.245	B9.51II	194665	192907AB														
133	1	KAP	CEP	AL ASHNA I	20	10	36.574	+71	33	42.36	+4.37C	B9	192816A	163422	D													
105	5	ALP-1 CAP	PRIMA GIEDI	20	14	52.647	-12	39	51.04	+4.240	G3	19294AB	163427	D														
106	6	ALP-2 CAP	SECUNDA GIEDI	20	15	16.878	-12	42	04.99	+3.564	G9	193485/E	163481	D														
185	34	P	CYG	REVENANT OF THE SWAN	20	15	36.527	+57	52	35.55	+4.755	B3	19327	69773	N													
111	6	NU	CAP	AL SHAT	20	17	53.485	-12	55	04.49	+4.752	B9	19432A	163458	D													
107	8	BET-1 CAP	DABIH MINOR	20	17	58.071	-14	56	38.31	+6.160	*B9	193452A3	163471	D														
108	9	BET-2 CAP	DABIH MAJOR	20	18	12.260	-14	56	26.57	+3.673	F8	V*AO	193485/E	163481	D													
189	37	GAM	CYG	SADR	20	20	25.927	+40	05	44.58	+2.214	FB	194034	49528	D													
356	50	ALP	PAY	PEACOCK	20	21	42.289	-56	53	50.02	+1.32C	B3	194924	246574	D													
195	45	OME-1 CYG	RUCBA	20	28	30.540	+48	46	57.97	+4.350	B2	195556AB	49712	D														
132	2	THE	CEP	AL KIDR	20	28	44.678	+62	49	32.32	+4.2L7	A	195725	18897														
201	2	EPS	DEL	DENE BULFIN	20	30	49.400	+11	07	55.83	+3.673	B6	195810	106230	C													
197	6	BET	DEL	ROTANEV	20	35	12.266	+19	25	12.31	C	+3.563	F5	196524AB	166316	C												
196	9	ALP	DEL	SVALOCIN	20	37	18.874	+15	44	04.30	+3.766	B9	196867A	106357	D													
186	50	ALP	CYG	DENE B	20	39	43.539	+45	06	03.12	+1.32C	K2	197345A	49941	D													
200	11	DEL	DEL	AL UKUD	20	41	07.413	+14	53	38.69	+4.420	A7	197461	106425	D													
191	53	EPS	DEL	AL JANAH	20	44	11.168	+33	46	55.15	+2.453	K0	197593	70474	C													
131	3	ETA CEP	KABALFIRD	20	44	16.468	+61	39	38.86	+3.422	KO	199149A	19019	D														
198	12	6AM-1 DEL	AL SALIB (B)	20	44	19.473	+15	56	34.71	+5.14C	F7	197963B	106475	D														
199	12	6AM-2 DEL	AL SALIB (A)	20	44	20.236	+15	56	34.32	+4.270	K2	197364A	106476	D														
11	2	BPS	AGR	ALBALI	20	44	58.213	-09	40	46.21	+3.71C	A1	198001	14481C	D													
16	6	MU	AGR	ALBULAN I	20	49	57.474	-09	10	19.76	+4.723	A8	198743	144895	D													
17	13	NU	AGR	ALBULAN II	21	06	52.3C	-11	34	31.13	+4.5C7	G8	201381	164182	D													
192	64	ZET	CYG	FAWARIS III	21	10	49.357	+30	01	15.51	+3.192	G8	202109	71070	D													
227	8	ALP	EQU	KITALPA-4	21	13	19.440	+05	02	24.35	+3.914	SO	197443/A5	126662	D													
128	5	ALP	CEP	ALDERAMIN	21	17	23.181	+62	22	23.74	+2.439	A7	20320A	19302	D													
129	6	BET	CEP	ALFIRK	21	28	01.326	+10	20	27.85	+3.18C	B2	205021AB	10057	D													
9	22	BET	AQR	SADALSUUD	21	29	55.649	-05	47	31.68	+2.878	GD	204867	145457	D													
109	40	6AM	CAP	NAS-IRA	21	37	19.372	-16	53	21.05	+3.565	AB	206088	164560	D													

TABLE 5 CONTINUED  
STAR NAMES AND STAR DATA ORDERED BY RIGHT ASCENSION

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RT. ASCEN. HR MIN SEC			DECLINATION DEG MIN SEC			P VISUAL MAG.	V SPECTRAL CLASS	S HENRY DRAPER CAT. NO.	SAO CAT. NO.	STELLAR PROP.
			21	40	18.952	50	57	33.10			206672	336665	
134	80 PI -1	CYG	AZELFAGE	21	41	43.756	+09	38	41.68	+2.357	K2	IB	206718A
360	8 EPS	PEG	ENIF	21	41	58.501	+58	33	06.65	+3.390	*	M2	127029
134	NU	CEP	ERAKIS	21	41	58.501	+58	33	06.65	+2.31C	*	M2	33693
110	49 DEL	CAP	DENEB ALGEDI	21	44	16.992	-16	21	19.42	+2.31C	*	A	206956AB
261	6 GAM	GRU	DENEB -UT	21	50	54.950	-37	36	03.59	+3.000	*	B8	213374
18	31 OMI	AGR	SACALMULK	22	00	43.657	-02	23	51.13	+4.454	*	V	149837
135	17 XI -1	CEP	KURTAH (B)	22	02	19.143	+64	23	03.30	+6.154	*	A	209190B
136	17 XI -2	CEP	KURTAH (A)	22	02	20.440	+64	23	01.68	+4.154	*	H	19826
366	22 NU	PEG	FUM AL FARAS	22	03	09.442	+04	49	48.17	+4.840	*	K4	19827
7	39 ALP	AGR	SACALMEIK	22	03	12.945	-CC	33	4E.59	+2.933	*	IB	127285
259	ALP	GRU	AL NA +IR	22	05	05.498	-47	12	14.54	+1.743	*	V	149862
363	26 THE	PES	BITAH	22	07	40.650	+05	57	04.13	+3.51E	*	A2	230992
14	43 THE	AGR	ANCIA	22	14	11.766	-08	01	59.75	+4.155	*	G8	127240
9	48 GAM	AGR	SADACH-BIA	22	19	04.420	-01	39	23.77	+3.84E	*	A0	145931
19	52 PI	AGR	SEAT	22	22	43.381	+01	07	22.97	+4.660	*	B1	146044
12	55 ZEI -1	AGR	ALSAD (B)	22	26	15.261	-00	16	35.27	+4.93S	*	F2	127520
13	55 ZEI -2	AGR	ALSAD (A)	22	26	15.513	-00	16	36.09	+4.223	*	F2	146107
397	17 BEI	PSA	FUM AL -UT 1	22	28	4G.670	-32	36	11.68	+4.325	*	A0	14608
398	29 RHO	CEP	KALBALRAI	22	28	40.358	-32	36	41.57	+7.753	*	S	213383
138	63 KAP	AGR	SITULA	22	29	27.436	+78	34	03.36	+5.52C	*	A2	212664
361	42 ZEI	PEG	HOMAP	22	35	10.023	-04	29	11.39	+5.025	*	K2	10402
368	43 OMI	PEG	SADALMAVAR	22	38	57.396	+10	34	11.35	+3.39C	*	BB	146210
260	26 BEI	GRU	DENEZ ALNA +R	22	39	24.327	+29	02	46.12	+4.907	*	A1	168103
362	44 ETA	PES	MATAR	22	40	39.464	+47	06	4E.20	+2.34C	*	V	214994
364	47 LAM	PEG	SADALNAZI	22	40	39.264	+29	57	33.42	+2.34C	*	G8	21566E
367	46 XI	PEG	SUUDALNUJUM	22	44	07.173	+23	18	07.41	+3.355	*	F7	215649AB
365	48 MU	PEG	SADALBARI	22	44	11.582	+11	54	57.24	+4.203	*	V	108165
10	76 DEL	AGR	SKAT	22	47	35.191	+24	20	13.72	+3.35C	*	S8	216131
396	24 ALP	PSA	FOMALHALI	22	51	59.901	-16	05	13.92	+3.26E	*	A3	90816
391	4 BET	PSC	FUM AL SAMAKA -4	22	54	53.531	-23	53	15.79	+1.512	*	A3	165375
358	53 BEI	PEG	SCHEAT	23	01	19.367	+03	33	01.75	+4.519	*	B5	19696
357	54 ALP	PEG	MARKA 3	23	01	20.170	+27	48	4C.45	+2.35C	*	M2	127934
137	33 PI	CEP	AL AGINAH II	23	06	19.007	+75	07	01.56	+4.907	*	A2	20981
369	62 FAU	PEG	SALM	23	18	03.505	+23	27	53.22	+4.580	*	A5	108378
370	68 UPS	PES	ALKARAB	23	22	52.759	+23	07	43.20	+4.414	*	F8	220661
130	35 GAM	CEP	ERRAI	23	37	16.533	+77	21	11.73	+3.225	*	K1	91186
													91253
													1D818

TABLE 6  
STAR NAMES AND STAR DATA ORDERED BY VISUAL MAGNITUDE

NUMBER	STAR DESIGNATION	PROPER NAME	RT. ASCEN <sup>a</sup>			DECLINATION			P VISUAL MAG. <sup>b</sup>	S SPECTRAL CLASS	N (4D) CAT. NO.	SAO <sup>c</sup> CAT. NO. <sup>d</sup>	STAR PROP.	
			HR	MIN	SEC	DEG	MIN	SEC						
93	9 ALP	CMA SIRIUS	06	42	56.713	-16	38	46.37	C	-1.457	C	A1 V+WD A	151881	O
112	1 ALP	CAR CANOPUS	06	22	50.493	-52	40	03.45	C	-0.720	C	F0 IA	234480	
64	16 ALP	BOO ARCTURUS	14	13	22.750	+19	26	30.95	C	-0.050	C	K2 III P	100944	
310	3 ALP	LVR VEGA	18	35	14.655	+38	44	09.69	C	+0.044	C	A0 V	124897	
123	123 ALP	CEN RIGIL KENTAUROS	14	36	11.253	-66	37	48.64	C	+0.059	C	G2 V+DKI	172167A	O
44	13 ALP	AUR CAPELLA	05	12	59.466	+45	56	59.04	C	+0.062	C	G8 III+F	128620/1AB	D
334	19 BET	ORI RIGEL	05	12	07.590	-08	15	28.65	C	+0.153	C	B8 IA	252838	D
103	10 ALP	CMI PROCTON	07	36	41.117	+05	21	16.81	C	+0.357	C	F5 IV-V	40186	O
229	229 ALP	ERI ACERNAR	01	35	51.107	-57	29	24.93	C	+0.493	C	B5 V	113907	
124	124 BET	CEN MARDAR	14	00	16.510	-60	07	58.09	C	+0.610	C	A1 II	61774	O
20	53 ALP	AQL ALTAIR	19	48	20.589	+08	44	05.71	C	+0.753	C	A7 IV-V	181642	D
333	58 ALP	ORI BETELGEUSE	05	52	27.809	+07	23	57.92	C	+0.300	C	M2 IAB	* 39801A	DV
66	87 ALP	TAU ALDEBARAN	C4	33	02.896	+16	24	37.51	C	+0.958	C	K5 III	2913EAB	
525	67 ALP	VIR SPICA	13	22	33.301	-10	54	03.36	C	+1.069	C	B1 V	61421AB	O
427	21 ALP	SCO ANTARES	16	26	26.206	-26	19	21.95	C	+1.082	C	H1 IB	115756	
250	78 BET	GEM POLLUX	07	42	15.517	+28	08	55.11	C	+1.146	C	K0 III	10144	
396	24 ALP	PSA FOMALHAUT	22	54	53.531	-29	53	15.79	C	+1.152	C	A3 V	125122	D
186	50 ALP	CYG DENEZ	20	39	43.539	+45	06	03.12	C	+1.249	C	A2 IA	113721	DV
183	81 BET	CRU MIWUSA	12	44	47.037	-59	29	56.53	C	+1.265	C	B2 .5IV	148415	D
181	ALP-1	CRU ACRUX (A)	12	23	48.064	-62	49	19.43	C	+1.312	C	B1 IV	148415/5AB	
283	32 ALP	LEO REGULUS	10	05	42.647	+12	12	44.54	C	+1.351	C	B7 V	62509A	D
97	26 EPS	CMA ADJARA	06	56	39.587	-28	54	10.24	C	+1.300	C	B2 II	79666	D
249	66 ALP	GEM CASTOR	07	31	22.654	+31	59	52.07	C	+1.352	C	A M+A1 V	216956	
435	35 LAM	SCO SHaulA	17	30	12.626	-37	04	09.63	C	+1.617	C	B1 V	191524	
335	24 GAM	ORI BELLATRIX	05	22	26.828	+06	18	21.71	C	+1.635	C	B2 III	172676	D
467	112 BET	TAU ELNATH	05	23	07.210	+28	34	01.74	C	+1.652	C	B7 III	60198	C
189	66 GAM	CRU GACRUX	12	28	22.727	-56	50	00.33	C	+1.667	C	M3 III	10198	
113	8 ET	CAR MIPLACIDUS	09	12	39.662	-59	30	39.63	C	+1.679	C	A0 III	159926	
337	46 EPS	ORI ALNILAM	05	33	45.476	-01	13	56.30	C	+1.694	C	B0 IA	208954	
259	1 ALP	GRU AL NAI'R	22	05	05.486	-47	12	14.54	C	+1.743	C	B5 V	112346	
338	50 ZET	ORI ALNITAK	C5	38	19.043	-01	58	02.98	C	+1.749	C	09.51B+B3	20952A	D
493	77 EPS	UMA ALIOVI	12	51	50.094	+56	13	51.14	C	+1.804	C	A0 P	13444	
489	50 ALP	UMA DUBHE	11	00	39.570	+62	01	16.80	C	+1.793	C	K0 III	28553	
372	33 ALP	PER MIRFAK	03	20	44.441	+49	41	06.04	C	+1.903	C	F5 III	9569A8	D
192	ALP-2 CRU ACRUX (B)	12	23	48.695	-62	49	22.28	C	+1.823	C	B3 N	15384		
522	GAM-2 VEL REGOR	08	07	48.465	-47	11	18.63	C	+1.833	C	B3 N	38787		
412	20 EPS	SGR KAUS AUSTRALIS	18	20	51.188	-34	29	36.94	C	+1.835	C	B3 V	230956	D
96	25 DEL	CMA WEZEN	07	21	24.436	-26	18	45.36	C	+1.838	C	B3 IV	112346	
431	24 GAM	SCO SARSAS	17	33	43.371	-42	58	05.15	C	+1.866	C	FG IB	230956	
114	EPS	CAR AVIOR	08	21	29.383	-59	20	52.93	C	+1.890	C	K0 II+8	230956	D
496	85 ETA	UMA ALKAID	13	45	34.294	+4	33	44.13	C	+1.88C	C	B3 V	112346	
45	34 BET	AUR MENKALINAN	05	55	51.579	+44	56	40.69	C	+1.900	C	A2 V	44752	D
356	45 ALP	PAV PEACCCK	20	21	42.289	-56	53	50.02	C	+1.92C	C	B3 IV	210091	
251	24 GAM	GEM ALHENNA	06	34	49.396	+16	26	37.40	C	+1.930	C	AD IV	40750	
481	48 ALP	TRA AIRIA	16	43	21.159	-68	56	19.89	C	+1.935	C	K4 III	113047	
94	2 BET	CMA MIRZAM	06	20	29.789	-17	55	47.23	C	+1.980	C	B1 II-III	151428	
271	30 ALP	HYA ALPHARD	09	25	07.191	-08	26	27.47	C	+1.981	C	K3 III	81797	
152	68 OMI	CET MIRA	02	16	49.045	-03	12	13.39	C	+2.000	C	GM6 E	136871	
171	13 ALP	CRB BLAZE STAR	15	57	24.555	+26	03	35.04	C	+2.0CC	C	PEC	14386AP	DY
34	13 ALP	ARI JAMAL	02	04	20.917	+23	13	37.07	C	+2.009	C	K2 III	84129	N

TABLE 6 CONTINUED  
STAR NAMES AND STAR DATA ORDERED BY VISUAL MAGNITUDE

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RI* ASCEN. HR MIN SEC			DECLINATION DEG MIN SEC			F	VISUAL MAG.	SPECTRAL CLASS	N	HENRY DRAPER CAT. NO.	SAO* CAT. NO.	STAR PROP.	
			40	41	42	43	44	45								
140	16 BET	CET DENEB KAIOS	00 43 04.811	-18 15 36.78	+2.028	K1	III			4128	147420					
q	93 BET	AND MIRAC-1	01 06 55.456	+35 21 21.74	+2.060	M0	III			6860	54471	D				
420	39 SIG	SIG NUNKI	18 52 09.327	-26 21 36.29	+2.063	B2	V			175191	167448					
393	53 KAP	ORI SAIP-1	05 45 23.013	-09 41 09.45	+2.064	B0.5IA				38771	132542					
320	55 ALP	RASAL-HAGUE	17 32 36.96	+12 35 41.92	+2.012	A5	III			159561	1C2932					
515	7 BET	UMI KOCHAB	19 50 49.645	+7 21 35.58	+2.013	K4	III			131013	8102					
3	21 ALP	AND ALP-HERAII	00 05 47.841	+28 48 52.12	+2.014	B8	III P			356	71765	O				
127	5 THE	CEN MENKENT	14 03 43.977	-36 07 29.64	+2.015	K0	III			123133	205188					
284	9 BET	LEO DENEBOILA	11 46 35.665	+14 51 05.80	+2.011	A3	V			102641A	93809	C				
125	5 GAM	CEN MU-LIFAIN	12 38 44.898	-4 41 07.32	+2.012	A0	III			1103048	223603	O				
5	57 GAM-1	AND ALMAH-1	02 00 49.177	+42 05 27.01	+2.019	S	K3			125334	37734	O				
373	26 BET	PER ALGOL	03 04 54.356	+40 45 52.46	+2.020	B8	V			* 19356A	38591	DV				
336	34 DEL-1	ORI MINTAKA	05 29 27.17	-0 20 04.41	+2.020	*	0.9.5II			36466A	132220	D				
189	37 GAM	CYG SAOR	20 20 25.327	+40 05 44.58	+2.024	F9	I			19403A	49528	D				
116	18 ALP	CAS SCHE-DAR	00 37 39.313	+56 15 48.60	+2.022	K0	II-III			3712A8	21609	DV				
172	5 ALP	CRB ALP-HECCA	15 32 34.145	+26 52 54.75	+2.020	*	A0	V			139006	83893				
206	33 GAM	DRA ELTANIN	17 55 26.576	+51 29 38.53	+2.021	K5	III			164058A8	30653	C				
524	1 LAM	VEL SU-JAIL	09 06 03.310	-4 13 47.60	+2.024	K5	I			78647A8	220378	D				
260	BET	GRU DENEB ALNA-4R	22 39 01.943	-47 08 48.60	+2.024	*	H3	II			21952	231258	D			
115	10T	CAR ASPIDISK-E	09 15 45.109	-59 03 53.70	+2.024	*	H3	II			80404	236808				
401	ZET	PUP NAOS	08 C1 49.552	-33 51 40.63	+2.025	F				668611	19852					
494	79 ZET-1	UMA MIZAR (A)	13 21 51.316	+55 11 09.46	+2.020	A2	V			146656A	28737	D				
117	11 BET	CAS CAPH	00 C6 29.715	+58 52 26.71	+2.021	F2	IV			43248	21133	O				
285	41 GAM-1	LEO ALGIEBA (A)	10 17 13.120	+20 05 42.85	+2.029	K0	III			89484A	81298	D				
430	7 DEL	SCO DSCHUBBA	15 57 22.318	-22 28 51.37	+2.03C	BO	V			143215	184014	D				
68	36 EPS	BOO IZAR	19 42 48.137	+27 17 02.65	+2.023	F0	IV			83500	287616					
490	48 BET	UMA MERAK	10 58 50.251	+56 39 03.12	+2.031	A2 V				95418	278737	D				
383	48 ALP	UMA ANKAA	00 23 49.029	-4 34 39.55	+2.021	K0	III			2261	215093					
360	8 EPS	PEG ENIF	23 91 43.756	+19 38 01.69	+2.039	K2	IB			206717A	127029	D				
434	KAP	SCO MULAB	17 39 01.549	-39 00 22.76	+2.040	B2	IV			160518	209163					
326	35 ETA	OPH SABIK	17 C7 30.461	-15 39 52.89	L	+2.03C	A2.5V			155125A8	160332	O				
491	64 GAM	UMA PHEODA	11 51 12.566	+53 59 21.98	+2.033	A0 V				103277	21879					
128	5 ALP	CEP ALDERAMIN	21 17 23.181	+6 22 23.4	+2.035	A7	IV-V			2032904	19302	C				
99	31 ETA	CHA ALUDRA	07 22 06.972	-29 12 16.09	+2.040	B5	IA			59350	173651					
191	53 EPS	CYG AL JANAI	20 44 11.168	+3 46 55.15	+2.047	K0	II			19793A	224538					
523	KAP	VEL MARKEB	09 20 33.853	-5 47 47.30	+2.048	B2	IV			811938	236891					
357	54 ALP	PEG MARKAB	23 C2 16.562	+14 56 05.11	+2.056	B9.5II				218045	1C8378					
514	1 ALP	UMI POLARIS	01 48 48.786	+8 9 01 43.74	+2.050	F9	IB			8990A	308	DV				
139	92 GAM	CET MENKAR	02 59 39.44	+0 3 53 41.15	+2.051	H2	III			18884	110920					
126	26 ZET	CEN BATEN KENTAU-RUS	13 52 24.510	-4 52 36.97	+2.050	B2	IV			121263	224538					
358	53 BET	PEG SC-EAT	23 C1 25.770	+27 48 40.45	+2.056	*				211906A	90981	DV				
287	68 DEL	ZOSMA	11 11 27.085	+20 47 52.67	+2.053	A4 V				91603	84727					
325	13 ZET	OPH SAIK	16 34 24.137	-10 28 02.81	+2.057	B0	IV E			149757	160006					
118	27 GAM	CAS NAVI	00 53 40.324	+60 26 47.38	+2.050					5394A8	114482	O				
298	11 ALP	CET ARNEB	05 30 31.394	-17 51 24.18	+2.051	F0	IB			3663A	150507	C				
176	4 GAM	CRW GIE-N	12 13 13.843	-17 15 51.84	+2.059	B8	III				106625	157176				
413	38 ZET	SGR ASCELLA	18 59 25.892	-2 57 12.79	L					17660A8	187600	O				
304	27 LIB	ZUBENESE-4-AMALI	15 14 18.732	-0 9 58.93	+2.060	A2	III			135742	140430					
35	6 BET	ARI SERATAN	01 51 52.340	+0 23 52.09	+2.062	B8	V			11636	75012					
428	6 BET-1	SCO GRAFFIAS (AB)	16 02 31.507	-19 40 12.45	+2.063	A5 V				144217AB	153682	D				

TABLE 6 CONTINUED

## STAR NAMES AND STAR DATA ORDERED BY VISUAL MAGNITUDE

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RI-ASCEN. HR MIN SEC			DECLINATION. DEG MIN SEC			P VISUAL MAG.	S SPECTRAL CLASS	N HARRY DRAPER CAT. NO.	SAO CAT. NO.	STAR PROP.		
			05	37	50.211	-34	05	58.73							
162	ALP	COL	05	37	50.211	-34	05	58.73	+2.61C	K2	III	190573A	121157	D	
449	24	SCP	15	41	48.151	+06	34	53.93	+2.64C	K2	III	40312AB	58636	D	
49	37	AUR	05	56	18.627	+31	12	45.05	+2.66C	B3-5V P	109379	180915			
175	9	BET	12	31	45.342	-23	07	13.60	+2.666	G5	III	121370	100766		
69	6	ETA	13	52	18.168	+18	38	51.35	+2.676	G0	IV	146051	22268		
119	37	DEL	01	22	34.998	+53	53	34.36	+2.677	A5	V	31398	57522		
50	3	AUR	04	53	43.982	+33	05	15.94	+2.692	K3	II	169454A	186681	D	
411	19	DEL	18	17	47.554	-29	51	04.69	+2.695	K2	III	158408	208895		
416	34	UPS	17	27	21.662	-37	15	28.57	+2.70C	B3	IV	310348	105223	D	
22	50	GAM	19	43	55.907	+10	29	24.39	+2.717	K3	II	186791	141052		
323	1	DEL	16	11	43.325	-03	34	01.41	+2.717	M1	III	148387AB	17074	D	
210	14	ETA	16	23	18.476	+61	37	37.10	+2.730	G8	III	110375/GAB	138917	D	
527	29	GAM	12	39	02.452	-01	10	31.58	C	+2.745	P	130841A	158840	D	
303	9	ALP-2	14	48	06.447	-15	50	06.59	+2.747	A3	V	312323	310348	D	
342	44	IOT	05	32	59.126	-05	56	28.26	+2.761	09	III	161096	122671		
321	60	BET	17	41	00.041	+04	35	11.84	+2.771	K2	III	31311	131794		
230	67	BET	C05	05	23.365	-05	08	56.54	+2.775	A3	III	149856	84411	D	
264	27	BET	16	28	40.105	+21	35	50.16	+2.783	G8	III	159181AB	30429	D	
205	23	BET	17	29	16.055	+52	20	15.65	+2.785	G2	II	866	91781		
359	88	GAM	00	10	39.447	+14	54	20.57	+2.827	B2	IV	113226	1C0384		
529	47	EPS	12	59	41.210	+11	13	38.90	+2.828	G9	III	169916	186841		
415	22	LAM	19	24	53.059	-25	27	04.19	+2.830	K2	III	201098A	164644	D	
410	49	DEL	21	44	16.392	-16	21	16.42	+2.830C	A	IV	149439	184461	D	
445	23	TAU	16	32	45.906	-28	06	50.56	+2.832	BD	V	303948	170457	D	
299	9	BET	05	26	06.530	-20	47	52.90	+2.835	G5	III	24396AB	58799	D	
374	44	ZET	03	50	58.959	+31	44	12.55	+2.850	B1	IV	72630A	76199	D	
471	25	ETA	03	50	30.024	+23	57	07.57	+2.861C	M3	III	178524ABC	48796	D	
130	18	DEL	19	43	24.671	+45	00	28.23	C	+2.870	89.5III	200967	145457	D	
8	22	BET	21	28	55.649	-05	47	31.68	+2.878	G0	IV	112413A	63257	D	
91	12	ALP-2	12	53	41.478	+38	35	16.92	+2.882	A0	P	24396AB	164336	D	
444	20	SIG	16	18	08.687	-25	28	26.14	+2.882	B1	IV	44478A	78297	D	
256	13	MU	06	19	56.096	+22	32	27.98	+2.890	M3	III	178524ABC	115456	D	
104	3	BET	07	24	26.557	+08	23	25.89	+2.894	B8	V	215182A	187756	D	
419	41	PI	19	06	47.450	-21	06	17.49	L	+2.894	F2	II-III	149283		
442	6	PI	15	55	49.311	-25	58	18.14	+2.897	B1	V	143018BC	183987	D	
7	34	ALP	22	03	12.945	-00	33	48.59	+2.902	G2	IV	209150	145862	D	
177	7	DEL	12	27	16.80	-16	14	14.14	+2.914	B2	IV	108167A	157323	D	
362	44	ETA	22	40	39.264	+23	57	33.42	+2.949	G2	II-III	215182A	90734	D	
231	34	GAM	03	55	41.772	-13	38	58.17	+2.953	M0	III	25025A	165115		
289	17	EPS	09	43	00.996	+24	00	19.62	+2.953	K3	III	105071	180531		
430	4	BET	02	06	33.519	+34	45	06.52	+2.957	A5	III	13161	55306		
261	6	GAM	04	58	22.510	+43	45	05.36	+2.958	F0	IV	31164	213374	D	
98	1	ZET	06	40	51.363	+25	10	56.92	+2.988	S8	IV	48394	78682	D	
432	101-1	SCO	19	C3	06.657	+13	47	15.86	+2.989	B9	V	17724	1C4461	D	
102	24	OMI-2	10	GAM	19.02	35.678	-30	25	35.80	+2.990	K0	III	165115	209696	
178	2	EPS	12	C7	32.519	-22	20	30.12	+2.993	K3	III	105071	180531		
430	4	BET	02	06	33.519	+34	45	06.52	+2.997	A5	III	20971	55306		
261	6	GAM	21	50	54.150	-37	36	07.59	+3.00C	BB	IV	44402	196698	D	
98	1	ZET	06	19	23.506	-30	02	23.86	+3.024	B2.5V	V	16141A	22842C	D	
102	24	OMI-2	10	GAM	17	44	05.000	-40	06.34.95	F2	IV	53138	172839		
			07	00	56.142	-23	45	32.46	+3.030	S3	IV				

TABLE 6 CONTINUED  
STAR NAMES AND STAR DATA ORDERED BY VISUAL MAGNITUDE

NUMBER	STAR DESIGNATION	STAR NAME	PROPER NAME	RT. ASCEN.			DECLINATION			F	VISUAL	W	SPECTRAL	N	HENRY DRAPER	SAO	CAT. NO.	STAR PROP.	
				HR	MIN	SEC	DEG	MIN	SEC										
501	36 MU	UMA	TANIA ASTRALIS	10	19	21.469	41	45	06.25	+3.0	111		B9758	4331C					
66	27 GAM	B00	SEGINUS	14	30	03.837	+38	31	34.12	+3.0	111		127762	64203	D				
517	13 GAM-2	U01	PHERKAD MAJOR	15	20	47.147	+72	00	42.97	+3.0	111		137422	8222C					
207	57 DEL	DRA	ALTAIS	19	12	32.824	+67	34	25.03	+3.0	111		G9	180711	18222				
108	9 BEI-2	CAP	DABIT MAJOR	20	18	12.222	-14	56	26.57	+3.0	111		F8	V-AQ	163481				
187	6 BEI-1	CYG	ALBIREO (A)	19	28	42.222	+27	51	12.44	+3.0	111		K5	11+B	872301	D			
274	16 ZET	HYA	MINAZAL V	08	52	45.932	+66	08	13.25	+3.0	111		G8	183912/34	76294				
163	8 ET	COL	WAZN	05	49	11.727	-35	47	09.73	+3.0	111		K2	117264	39425				
414	ETA	SGR	NAMALWARID	18	14	14.513	-36	46	93.49	+3.1	111		M3	196240	16761649				
436	MU -1	SCO	TALI AL SHAULAH I	16	48	28.673	-37	57	48.92	+3.1	111		B1.5V	*	151890	208102			
265	65 DEL	LER	SARIN	17	12	58.555	+24	53	48.78	+3.1	111		A3	IV	156164	84951	D		
498	9 IOT	UMA	TALITHA	08	55	47.626	+48	14	22.05	+3.1	111		F7	766444	42630	D			
48	10 ETA	AUR	HAEDUS II	05	C3	CC-2.9	+41	10	08.39	+3.1	111		B3	V	32630	40026			
497	25 THE	UMA	AL-HAUD V	09	29	31.096	+51	54	23.18	+3.1	111		F6	IV	823243	27289	D		
209	22 ZET	DRA	DIBAH	17	C9	38.146	+55	46	31.59	+3.1	111		B6	II	155763	17365			
422	27 PHI	SGR	NAMALSADIRAI I	19	42	31.562	-27	02	38.49	+3.1	111		B8	III	17330C	187239			
129	8 BET	CEP	ALFIRK	21	28	01.326	+70	20	21.85	+3.1	111		B2	III	*	205021A8	10057	CV	
262	64 ALP-1	HER	RASALGETTI (A)	17	12	21.948	+14	26	45.34	+3.1	111		M5	II	156014A	10268C	D		
349	1 PI -3	ORI	TASIT	04	47	07.350	+56	52	32.26	+3.1	111		F6	V	3052	112106			
192	64 ZET	CYG	FAWARIS III	21	10	49.357	+30	01	15.51	+3.1	111		G8	II	202109	71070			
380	25 RHO	PER	SORGONEA TERITA	03	C1	57.955	+36	28	52.86	+3.2	111		H4	II-III	*	15058	56138	V	
255	7 ETA	GEM	PROPPUS	06	11	51.509	+22	31	23.36	+3.2	111		M3	III	*	42995A8	78135	DV	
130	35 GAM	CEP	ERRAI	23	37	16.513	+77	21	11.73	+3.2	111		K1	IV	222404	10816			
324	2 EPS	OPI	YEO POSITIOR	16	15	40.349	-04	34	19.57	+3.2	111		F3	III	146791	141086			
227	65 THE	AQL	ALMIZAN III	20	C8	43.453	-00	58	16.06	+3.2	111		B9	.5III	191692	144150			
312	14 GAM	LYR	SULAFAT	19	57	04.294	+32	37	11.25	+3.2	111		B9	III	176437A	67663	D		
235	1 HE-1	ERI	ACAMAR (A)	02	56	1.882	-40	30	15.15	+3.2	111		A3	V	19622A	216113	D		
110	76 DEL	AQR	SKAT	05	21	53.901	-16	05	13.92	+3.2	111		A3	V	216627	165375			
327	42 THE	OPH	SARAFSA	17	19	56.157	-24	57	05.20	+3.2	111		B2	IV	157C56	185320			
211	12 IOT	DRA	EDASIC-4	15	23	48.741	+59	09	26.16	+3.2	111		K2	III	137753	29520			
384	8 ET	PHE	ALRIAL III	01	C3	51.151	-46	59	05.78	+3.3	111		E59	FAB	215365	D			
492	69 DEL	UMA	MEGREZ	12	12	52.594	+57	18	36.56	+3.3	111		A3	V	106531	177516			
421	40 TAU	SGR	NAMALSACIRAH II	19	03	49.510	-27	44	43.14	+3.3	111		K1	III	177516	187683			
307	20 SIG	LIS	ZUBEN ACIRAH	15	01	08.247	-25	05	12.27	+3.3	111		M4	III	133216	183139			
231	70 THE	LEO	CHERTAN	11	11	37.556	+15	42	11.38	+3.3	111		A2	V	97633	59512			
402	7 XI	PUP	4ZMICISKE	07	47	11.422	-24	43	59.22	+3.3	111		G3	IB	637004A3	174601	D		
504	1 OMI	UMA	MUSCIDA	08	26	07.631	+60	53	14.56	+3.3	111		G5	III	71368A	14573	D		
339	28 ETA	ORI	SAIF AL JAHSSAR	05	21	52.616	-02	26	23.58	+3.3	111		M3	III	132071	0			
258	31 XI	SEM	AL ZIRR	06	92	28.556	+12	57	09.31	+3.3	111		F5	IV	35411A3	48737			
23	30 DEL	AQL	ALMIZAN I	19	22	58.557	+03	00	49.98	+3.3	111		F0	IV	48074	124603			
530	73 ZET	VIR	HEZE	13	32	C8.554	-00	20	27.51	+3.3	111		A3	V-N	118058	139420			
273	11 EPS	4YA	MINAZAL III	08	44	07.555	+06	36	12.11	+3.3	111		G0	III+F7	743744BC	9053	D		
528	43 DEL	VIR	MINELAUVA	12	53	04.926	+C3	40	02.60	+3.3	111		M3	III	11230Q	119674			
120	45 EPS	CAS	SEGIN	01	50	46.319	+63	25	23.89	+3.3	111		B3	IV P	28315	67451	DV		
361	42 ZET	PES	LOMAN	22	38	53.556	+10	39	11.39	+3.3	111		B8	V	214922A3	11443	D		
344	39 LAM	ORI	MEISSA	05	32	22.913	+03	54	03.35	+3.3	111		A3	V	36851724B	11443	D		
385	71 GAM	PHE	ALRIAL V	01	26	11.716	-43	34	25.94	+3.4	111		K5	II	9053	215516			
311	10 BET-1	LYR	S-ELIAK	18	49	13.335	+33	18	12.51	+3.4	111		B	PE	174638/9A	28315			
433	78 THE-2	TAU	YMDUM IV	04	25	48.240	+15	45	41.80	+3.4	111		A7	IV	28315	93957			
479	2 ALP	TRI	CAPUT TRIANGULI	01	5C	13.490	+29	20	10.14	+3.4	111		F6	IV	11443	74996			

TABLE 6 CONTINUED  
STAR NAMES AND STAR DATA ORDERED BY VISUAL MAGNITUDE

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RT. ASCEN. HR MIN SEC		DECLINATION DEG MIN SEC		F	VISUAL MAG.	SPECTRAL CLASS	HENRY DRAPER HD CAT. NO.	SAO CAT. NO.	STAR PROP.	
			N	H	E	S							
131	3 ETA	KABALFIED	20 44 16.988	+51 38 38.86	+3.422	MO IV	199149A	19019	O	143021	177756		
29	16 LAM	AL-TALIMAIN I	19 03 35.698	-04 57 32.74	+3.433	38 V	177756	1443021		81265	85025		
289	36 ZET	LEO AD-HAFERA	10 13 54.759	+23 40 01.94	+3.435	F0 III	147632	147632		43268	6805		
145	31 ETA	DENE'S AL GENUBI	01 06 04.420	-10 26 48.57	+3.437	K3 III	147632	147632		43268	89021		
500	33 LAM	UMA TANIA BOREALIS	10 14 05.153	+43 09 53.54	+3.455	A2 IV	169704B	110707	O	169704B	169704B		
141	86 GAM	CET KAFAL GIOMA	02 40 42.397	+03 01 34.05	+3.458	A2 V	169704B	110707		98262AB	62486	D	
502	54 NU	UMA ALULA BOREALIS	11 15 46.497	+23 22 02.56	+3.465	K3 III	135722A	135722A		64589	64589	O	
67	49 DEL	BOO TIIBA	15 13 29.117	+33 30 01.26	+3.479	68 III	83908/3A	83908/3A		81299	89458	O	
286	41 GAM-2	LEO ALGIEBA (B)	10 17 13.401	+20 05 35.69	+3.479	S	83908/3A	83908/3A		98703	98703	O	
295	14 OMI	LEO SUBRA	09 38 29.008	+10 07 14.64	+3.480	A2 F6	11	113208	45337				
65	42 BET	BCE NEKKAR	15 00 03.669	+40 35 12.80	+3.489	G8 III	113208	45337					
165	48 NU	PEG SADAL BARII	22 47 35.191	+24 20 13.72	+3.490	G8 III	216131	90816					
156	52 TAU	CET AL NAYMAT II	01 41 49.660	-16 12 00.50	+3.496	G8 V P	10700	147986					
226	55 ETA	AGL AL MIZAN II	19 49 55.525	+00 52 33.23	+3.500	* F6 I3	*	167929	125159	V	210418	127340	
363	26 THE	PES BIHAM	22 07 40.600	+05 57 04.13	+3.515	A2 V	116569	116569	D	69267	56986AB		
779	17 BET	CNC AL TARF	08 13 48.282	+09 20 27.73	+3.523	K4 III	116569	116569	D	128694	79294	O	
252	55 DEL	GEM WASAT	C7 17 08.265	+22 04 34.06	+3.526	FO IV	130686	130686		21376 AB	21376 AB		
232	23 DEL	ERI RANA	03 40 51.035	-09 55 53.05	+3.530	K0 IV	81737	98955		2329	170700		
290	30 ETA	LEO AL JABYAH	10 04 36.533	+17 00 26.17	+3.530	AD IB	81737	98955					
470	74 EPS	TAU OCULUS BOREUS	04 25 41.585	+19 04 16.36	+3.534	K0 III	29305	93954					
147	8 10 T	CET SCHEMELI	00 16 52.784	-09 06 03.44	+3.540	K2 III	1522A	128694	O				
247	91 UPS-4	ERI BEEMIM I	04 16 00.036	+22 04 34.06	+3.553	L 88.5V	21376 AB	194902	O				
437	43 MU-2	TAI AL SHAULAH II	16 48 56.599	-37 56 03.17	+3.562	B2 IV	151985	218116					
223	44 CHI	DRA AL-JAKAN	18 21 57.480	+72 42 42.15	+3.563	F7 V	170153	9087					
106	6 ALP-2	CAP SECUNDA GIEDI	20 15 16.718	-12 42 04.49	+3.564	G9 III	192947AB	163427	O				
51	1 AND	NEMBUS	01 34 59.636	+48 22 32.66	+3.570	K3 III	9927	37375					
493	12 KAP	UMA KAFZATANIA	09 13 21.266	+47 21 20.79	L	15.512 A0	77327AB	42661	C				
197	6 BET	DEL ROTANEV	20 35 12.206	+14 25 12.31	C	+3.583	42661	106316	O				
300	13 GAM	LEP KURSI AL JABBAR	05 42 22.53	-22 21 48.30	+3.587	F6 V	136524AB	106316	O				
146	45 THE	CET AL NAYMAT I	01 21 31.363	-08 26 27.16	+3.603	K0 III	38333A	110759	O				
526	5 BEI	VIR ZAVIJAVA	11 48 65.387	+02 02 47.61	+3.608	F8 V	9512A	129274	O				
133	41 -C-1	ARI NAIR AL BUTAIN	02 47 02.036	+27 03 20.55	+3.610	B8 V	102807	119076	O				
464	27 -F	TAU ATLAS	03 46 11.630	+23 59 07.66	+3.626	BB III	75596	75596	O				
468	54 GAM	TAU YADUM I	04 16 56.651	+15 30 00.62	+3.635	K0 III	21376 AB	76228	O				
204	11 ALP	DRA THUBAN	19 03 01.963	+64 36 51.57	+3.652	AD III	38333A	110759	O				
488	23 -H	UMA AL-JAUO IV	09 27 36.565	+63 16 55.11	+3.656	FO IV	61937A	164560	O				
109	40 GAM	CAP NAS-HIRA	21 37 19.312	-16 53 21.05	+3.665	AB M	206088	164560	O				
173	3 SET	CRB NUSA-KAN	15 25 45.444	+29 16 37.26	+3.679	FD III	131909	83831	O				
513	63 CHI	UMA ALKAFFAZAH	11 43 25.030	+48 03 24.16	+3.701	K0 III	102224	43886					
454	37 EPS	SCP NASAK SHAMIYA I	15 43 52.670	+15 34 37.42	+3.712	A2 IV	141003A	117125	O				
450	28 BET	SCP NASAK SHAMIYA II	04 48 32.421	+05 31 16.34	+3.712	S2 III	21376 AB	21376 AB					
350	3 PI -4	ORI MEKBUDA	07 C1 08.627	+2C 38 43.95	+3.712	F7 IB	30836	112142	O				
254	43 ZET	CEI ELECTRA	03 41 59.055	+23 57 27.82	+3.722	S6 III	52913A	79031	CV				
458	17 TAU	CRB NASAK	15 45.444	+29 16 37.26	+3.726	FD III	23302	76131					
459	37 EPS	SCP NASAK SHAMIYA III	15 48 19.243	+04 37 36.85	+3.733	A M	141003A	117125	O				
201	60 BET	AGL ALS-HAIN	19 52 51.383	+06 16 45.84	+3.714	S8 IV	188512	112142	O				
351	8 PI -5	ORI AL TAJ III	04 51 38.661	+02 21 37.24	+3.720	S2 III	31237	112197	O				
144	55 ZET	CEI BAIEN KAIIOS	01 46 59.447	-10 34 52.90	+3.722	K2 III	144059	144059	O				
326	32 XI	DRA GRUMIUM	17 52 33.700	+56 52 47.69	+3.737	K2 III	163889	30631	O				
322	62 GAM	OPH MULIPHEN	17 45 23.019	+02 43 28.28	+3.738	A0 V	161668	122154	O				
265	20 GAM	HER NASAK SHAMIYA III	16 49 42.737	+19 16 09.32	+3.735	A9 III	197547A	102107	O				

TABLE 6 CONTINUED  
STAR NAMES AND STAR DATA ORDERED BY VISUAL MAGNITUDE

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RT. ASCEN. HR MIN SEC			DECINATION DEG MIN SEC			F VISUAL MAG.	V SPECTRAL CLASS	S HENRY DRAPER CAT. NO. (HD) CAT. NO.	SAO* CAT. NO. PROP.		
			0	42	844	17	25	36.81						
469	61 DEL	TAU HYADUM II	0	20	02.844	+17	25	*3.757	K0	III	93897			
196	9 ALP	DEL SVALOCIN	20	37	18.874	+15	44	04.30	+3.766	V	196967A	106357		
375	15 ETA	PER MIRAM	02	47	01.835	+55	41	22.43	+3.767	K3	IB	17506A	23655	
111	2 EPS	AQR ALBAL I	20	44	58.217	-09	40	46.21	+3.770	A1	V	144810		
193	1 KAP	CYG FAWARIS I	19	15	56.786	+53	16	31.88	+3.773	K0	III	17537		
301	15 DEL	LEP ARSI AL JAUZA +	05	49	10.193	-20	52	55.23	+3.780	S8	III	39364	170926	
376	27 KAP	PER MISAM	03	06	06.156	+44	40	1C.21	+3.783	K0	III	15476A	38609	
511	29 UPS	UMA AL-HAOU VI	09	47	22.102	+59	16	30.31	+3.794	F2	IV	049999AB	27401	
47	8 ZET	AUR HAEDUS I	04	58	58.680	+41	00	17.79	L	+3.802	*	32058/S		
503	53 XI	UMA ALULA AUSTRALIS	11	15	30.162	+31	48	38.98	C	+3.803	GO	V	62484	
296	0 MI	PRAECIPUA	10	50	31.321	+34	29	05.62	+3.806	K0	III-IV	94264	62297	
245	52 UPS-2	ERI THEEMIN	04	33	36.215	-30	39	48.98	+3.810	K0	III	29291	195148	
329	10 LAM	OPH MARFIK	16	28	23.341	+02	05	31.06	C	+3.812	A1	V	148857AB	
390	113 ALP	PSC ALRESCH	01	59	27.392	+02	31	+3.820	H0	A+2 P	124967AB	12658		
212	1 LAM	DRA GIAUSAR	11	28	27.546	+69	36	26.09	+3.827	HD	III	10291	0	
378	38 OMI	PER ALATIK	03	41	10.598	+32	07	53.47	L	+3.829	81	III	23380AB	56673
208	63 EPS	DRA TYL	19	48	21.063	+70	08	26.55	+3.833	G8	III	188019AB	9540	
q 51	41 GAM	SCP NASAK SWAMIYA II	15	54	08.455	+15	49	24.77	+3.841	F6	V	142650	101826	
99	6 AM	AQR SADACHIBA	22	19	04.820	-01	38	23.71	+3.845	AO	V	210261	146044	
972	77 THE-1	TAU HYADUM III	04	25	42.982	+15	51	10.15	+3.849	K0	III	29357	93955	
53	-L ERJ	SCEPTRUM	04	35	53.315	-14	24	01.60	+3.853	K2	III	29523AB	149781	
128	16 OMI-1	CMA UDRA	06	52	03.362	-24	07	12.97	+3.860	K3	IVAB	50977	172542	
416	13 MU	SGR ALAN	18	10	46.124	-21	04	25.96	+3.865	B8	IV	166931AB	186497	
959	20 TAU	MAIA	03	42	50.756	+24	12	97.01	+3.879	K1	III-IV	2308	76155	
531	15 EIA	VIR ZANIAH	12	17	20.161	-00	23	20.65	+3.880	A2	V	101235	138721	
276	35 IOT	VIA UKDAV IV	09	37	18.152	-00	54	53.79	+3.883	K3	III	137035		
535	107 MU	VIR RIGILAWHA	14	40	25.283	-05	26	3C.92	+3.884	F3	IV	129502	140090	
443	5 RHO	SCO ICIL	15	53	47.507	-29	04	10.42	+3.883	B2	V	142669A	183957	
234	3 ETA	ERI AZ-A	02	53	58.552	-09	05	45.89	+3.887	K1	III-IV	163322	130197	
294	24 MU	LEO RASALAS	09	49	55.436	+26	14	36.08	+3.890	K2	III	85503	81064	
227	8 ALP	EQU KITALPA	21	13	1.940	+05	02	24.35	+3.894	AO	V	20244/E	126662	
386	KAP	ALRIAL I	00	23	44.906	-43	57	25.67	+3.898	A7	V N	215092	229659	
81	97 DEL	CNC ASCELLUS AUSTRALIS	08	41	50.147	+18	20	21.83	+3.915	K0	III	74442	194984	
246	43 UPS-3	ERI BEEMIM II	04	22	09.409	-34	07	54.81	+3.930	M1	III	29208	130197	
995	79 ZET-2	UMA MIZAR (B)	13	21	55.988	+55	10	5E.63	+3.935	A2	M	11665B	28738	
364	47 LAM	PEG SADALNAZI	22	44	07.173	+23	19	07.41	+3.935	G8	III-III	215655	90775	
907	407 ALP	RUKBAT	19	20	25.492	-4C	42	43.10	+3.936	B9	III	161869		
447	9 OME-1	SCO JAB-JAT ACRAB II	16	03	52.653	-20	32	07.11	+3.939	B1	V	144420	184123	
157	59 UPS	CET AL-NAYMII III	01	57	38.911	-21	13	05.71	+3.935	M1	III	12274	167471	
534	5 MU	ERAKIS	21	41	58.501	+58	33	00.65	+3.936	M2	IV	33693	DV	
987	80 -6	UMA ALCOR	13	23	13.417	+55	14	52.99	+4.013	A5	V	116842	28751	
908	807-1	ARKAB PRIOR	19	19	02.016	-44	33	17.72	+4.010	BB	V N	181454	229646	
939	NU-2	SCO JABBA-I (A)	16	C9	C5.C91	-19	19	5E.20	+4.012	B2	IV-V	145502AB	159764	
28	13 EPS	AQL D-ZAN3 AL OKAB	18	57	21.118	+14	53	56.41	+4.020	K2	III	176411	104318	
86	48 IOT-2	CNC ZUZANAY (A)	08	43	40.514	+28	56	35.19	+4.031	S8	IV	74739A	80416	
174	1 ALP	ALCHIBA	12	05	49.746	-24	27	00.13	+4.032	F2	V	105452	180505	
201	2 EPS	DEL DENEB DULFIM	20	30	49.400	+11	07	55.83	+4.035	B6	III	195810	1CC6230	
377	46 XI	PER MENKIB	03	55	42.925	+35	38	56.50	+4.037	B5	V	24912	56856	
238	38 OMI-1	BEID	04	C9	25.139	-66	52	55.74	+4.045	F2	II-III	26514	131019	
70	23 THE	BOO PRIMUS ASELLUS	14	23	23.610	+52	04	52.32	+4.046	F7	V	126650	29137	

TABLE 6 CONTINUED

STAR NAMES AND STAR DATA ORDERED BY VISUAL MAGNITUDE

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RI. ASCEN. HR MIN SEC			DECLINATION DEG MIN SEC			VISUAL V MAG.	SPECTRAL CLASS	HENRY DRAPER CAT. NO.	SAO* CAT. NO.	STAR PROP.	
			0	36	54.985	00	06	56.00						
142	82 DEL	CET AL JIDHMAH III	02	36	54.985	+00	06	56.00	+4.066	K0	III	95272	156375	
179	7 ALP	CRT ALKES	10	57	20.118	-18	01	55.62	+4.066	K2	III	31424	94218	
346	9 OMI-2 ORI	AL KUMM II	04	53	33.123	+13	26	1.64	+4.073	F7	III-IV	124893	139824	
532	99 TOT VIR	SYRMA	19	13	23.345	-05	45	46.18	+4.077	K0	III	37160	11958	
532	40 PHI-2 ORI	HIKA	05	34	09.415	+09	15	51.81	+4.082	A2	N	179253	210930	
355	169 ALP CRA	ALFECCA MERIDIANA	19	06	04.345	-37	59	03.49	+4.100	N		1522303		
95	23 GAM CHA	MIRZA	07	01	29.713	-15	33	28.79	+4.105	88	II	53244	116955	
272	4 DEL HYA	MINAZAL I	08	35	00.594	+05	52	45.60	+4.103	AD	V	73252	78423	
257	18 NU	GEN NUCATAI	06	25	59.527	+02	14	44.06	+4.153	B7	IV E	45524F*	0	
14	93 THE AGR	ANCIA	22	14	11.766	-08	01	58.75	+4.155	G8	III-IV	211391	145991	
440	XI -1 SCO	GRASSIAS (A)	16	C1	36.189	-11	14	12.28	L	+4.18C	F5	IV	144055/GAB	156665
462	23 TAU	MEROPÉ	03	43	21.195	+23	47	38.99	+4.176	B6	NN	23480	76172	
79	19 LAM BOO	AULAD ALTHIBA	14	19	28.569	+46	19	01.94	+4.176	AD	P	125112	64965	
453	13 DEL-2 SCP	NASAK YAHANI I (A)	15	32	24.681	+10	42	17.82	+4.179	S	FD	139134	101624	
533	58 KAP VIR	ALSAFAR I	14	10	13.451	-10	02	3C.80	+4.183	K3	III	124284	158427	
367	46 XI PEG	SUUDALNUJUH	22	44	14.592	+11	57	.24	+4.203	F7	V	215684	108165	
132	2 THE CEP	AL KIDR	20	28	44.678	+62	49	32.32	+4.207	A	H	195725	18897	
222	43 PHI DRA	ALD-IBA	18	21	28.505	+71	18	45.23	L	+4.210	AU	P	1700004A/B	9084
474	65 KAP-1 TAU	ALKALBAIN III	04	22	23.683	+22	10	51.94	+4.22C	A7	V	27934	76601	
79	65 ALP ACUBENS	ACUBENS	08	55	45.497	+12	03	09.07	+4.228	A	M	76756	88267	
153	89 PI CET	SADR AL KAIOS IV	02	41	44.410	-14	04	10.17	+4.215	B7	V	11081	148575	
105	5 ALP-1 CAP PRIMA GIEDI	PRIMA GIEDI	20	14	52.667	-12	39	51.04	+4.209	G3	IB	19236A	163422	
303	31 LYN SHAUKAH	SHAUKAH	08	19	25.154	+43	21	0C.63	+4.245	K5	III	20212	42319	
395	110 OMI PSC TORCULAR	TORCULAR	01	42	44.668	+08	59	29.64	+4.253	G8	III	101010	110723	
149	97 MU CET	AL KAFF AL JIDHMAH IV	02	42	14.102	-C9	15	02	+4.256	FD	IV	11054	216114	
236	THE-2 ERI ACAMAR (3)	ACAMAR	02	56	22.578	-40	30	14.34	+4.263	S	*	1862B	D	
92	8 BET CVN CHARA	CHARA	12	31	22.289	+41	37	44.10	+4.266	GO	V	109358	44230	
237	69 LAM ERI KURSI AL JAUAZAH II	AL SALIB (A)	05	06	95.092	-08	49	00.32	+4.220	B2	IV	33328	131824	
195	12 GAM-2 DEL	AL KAFF AL JIDHMAH II	02	45	20.216	-15	56	34.82	+4.271	B2	IV	197964	116416	
151	73 XI-2 CET	AL KAFF AL JIDHMAH II	02	25	29.791	+08	14	13.15	+4.271	B9	III	15318	110543	
519	22 EPS UMI CIRCITORES	CIRCITORES	16	51	00.515	+82	07	21.54	+4.266	G5	III	* 153751	277C	
409	361-2 SGR ARKAB POSTERIOR	ARKAB POSTERIOR	19	19	36.611	-4	53	44.93	+4.290	FO	III N	181623	229654	
476	69 UPS TAU ALKBALBAIN V	ALKBALBAIN V	04	23	18.680	+22	42	06.75	+4.288	FO	III-IV	28024	76608	
275	7 ETA HYA MINAZAL II	MINAZAL II	09	40	36.696	+03	34	45.66	+4.293	S3	V	74280	117050	
465	19 -G TAU	TARGETA	03	42	13.572	+24	18	42.01	+4.238	86	V	23338	76440	
520	16 ZET UMI AKFA FARKADAIN	FARKADAIN	15	45	47.812	+77	56	57.09	+4.303	A3	V	142105	8328	
75	51 MU -1 BOO ALKALUROPS	ALKALUROPS	15	22	35.595	+33	53	45.49	+4.316	F5	V	137391	64686	
293	4 LAM LEO ALTERF	ALTERF	09	28	52.249	+23	11	22.24	+4.310	K5	III	80885	22070	
167	42 ALP COM DIADEM	DIADEM	13	C7	33.321	+17	47	36.25	L	+4.318	F5	V	114318/5AB	117146
449	10 OME-2 SCO JAB-HAT ACRAZI II	JAB-HAT ACRAZI II	16	04	28.091	-20	44	06.53	+4.320	GG2	V	144608	184435	
1	55 ZET-2 AGR ALSAC (A)	ALSAC (A)	22	26	15.513	-CC	16	36.08	+4.323	S	F2	IV	2110526	67321
397	17 BET PSA FUM AL -HUT I	FUM AL -HUT I	22	28	40.010	-32	36	11.08	+4.325	S	*	2133984	93328	
121	33 THE CAS MARFAK	MARFAK	01	C8	02.554	+54	52	04.32	+4.332	A7	V	6961	22070	
278	13 RHO HYA MINAZAL IV	MINAZAL IV	08	45	47.115	+06	01	26.07	+4.347	AU	V	2513743	117146	
518	23 DEL UMI VILCUN	VILCUN	17	48	18.218	+86	36	34.38	+4.347	A1	V	166205	2937	
316	6 ZET-1 LYR NASR ALWAKI I	NASR ALWAKI I	18	43	02.913	+37	33	06.28	+4.347	A	H	1736484	0	
39	57 DEL ARI BOTINE	BOTINE	C3	C8	45.685	+19	32	2C.32	+4.35C	K2	III	157187	93328	
168	15 GAM COM AL DAFIRAH	DAFIRAH	12	24	26.870	+28	32	46.07	+4.353	K1	III-IV	109381	82313	
348	2 PI-2 ORI AL TAJ I	TAJ I	C4	97	53.547	+C8	48	51.64	+4.355	A0	V	30739	11224	
403	5 ALP SGE S-AM	S-AM	19	37	51.612	+17	53	51.21	+4.353	GU	II	185758A	105120	

TABLE 6 CONTINUED  
STAR NAMES AND STAR DATA ORDERED BY VISUAL MAGNITUDE

STAR NUMBER	STAR DESIGNATION	STAR PROPER NAME	RT. ASCEN. HR MIN SEC			CECLINATION DEG MIN SEC			P VISUAL MAG.			S SPECTRAL CLASS			HENRY DRAPER CAT. NO.			SAO CAT. NO.	STAR PROP.
			0	10	20	0	30	40	0	30	40	0	30	40	0	30	40		
150	65 XI -1 CET	AL KAFF AL JID-MAH I	02	10	20.747	+08	36	47.36	+4.35C	38	II	1.2611	110408						
165	KAP COL	KURUD II	06	14	46.278	-35	07	22.03	+4.36D	68	III	4.3785	196643						
28	41 IOI	AQL AL THALIMAIN II	19	34	08.066	-01	23	55.88	+4.36C	25	III	184930	143597	C					
133	1 KAP	AL AG-NAM I	20	10	36.514	+7	33	42.36	+4.37C	89	III	192904A8	9665	D					
318	20 Eta	CEP ALADFAR	19	12	03.290	+39	03	32.08	+4.38D	B2	IV	180163A	68010	D					
329	40 XI	OPH AGGIA	17	18	00.551	-21	03	39.72	+4.39J	F2	V	156894A8	185296	D					
268	76 LAM	HER MASYM	17	28	42.947	+26	08	49.49	+4.40C	K4	III	158885	85163						
137	33 PI	CEP AL AG-NAM II	23	06	18.007	+75	07	01.56	+4.40C	52	III	218653A9	10629	D					
354	37 PHI-1 ORI	TEKA	05	32	04.418	+09	21	26.67	+4.41C	BG	IV	356822	112914						
370	68 UPS	PEG ALKARAB	23	22	52.793	+23	07	45.20	+4.41C	F9	IV	220651	91253						
537	6 ALP	ANSER VUL	19	26	33.410	+24	33	44.90	+4.42C	MD	III	183438	87261						
200	11 DEL	DEL AL UKUO	20	41	07.413	+14	53	36.69	+4.42D	I	III P	197461	106425						
392	63 DEL	PSC KUTCN I	00	46	05.113	+07	16	47.93	+4.43C	K5	III	4656	11C9474						
239	40 OMI-2 ERI	KETID	04	12	58.161	-07	43	95.89	+4.43J	K1	V	26365A	131063	D					
279	5 SIG	MINKAL-SUJA	08	36	08.611	+02	31	05.48	+4.43E	K2	III	73471	116988						
136	17 XI -2 CEP	KURJAH (A)	22	02	20.440	+64	23	01.69	+4.454	A	M	209793A	19827	D					
220	60 IAU	DRA AT-HAFI II	19	16	31.412	+73	15	47.87	+4.455	K3	III	181984	9366						
352	10 PI -6 ORI	AL TAJ V	04	55	57.260	+01	39	20.04	+4.458	K2	II	31167	112281						
292	1 KAP	LEO MINKARASAD	09	21	44.777	+26	23	55.32	+4.46C	K2	III	81144AB	80807	D					
486	15 -F UMA	AL-HAUD I	09	05	21.316	+51	49	28.27	+4.46J	A	N	73205	27136						
180	11 BEI	CRT AL SHARASIF II	11	C9	11.730	-22	33	08.99	+4.46J	A2	III-IV	97271	179624						
112	55 ZET-1 AQR	ALSAD (B)	22	26	15.261	-00	15	35.27	+4.46J	S	IV	213051A	146107	D					
244	50 UPS-1 ERI	BEEMIM III	04	31	32.818	-29	51	55.49	+4.51C	66	III	28095	169570						
406	62 -C SGR	TEREBELLUM IV	19	59	35.83	-27	51	01.64	+4.50J	M4	III	189735	188844						
17	13 NU	AQR ALBULAN II	21	06	52.307	-11	34	31.13	+4.50J	S8	III	201381	164182						
399	-K-1 PUP	MERKEB (A)	07	36	46.23	-26	41	12.59	+4.50J	S9	III	61555A	174193	D					
32	39 AR1	BARANI III	02	44	55.469	+25	02	26.66	+4.51J	K1	III	17361	75576						
218	67 RHO	DRA TAIS II	20	02	35.927	+67	43	51.21	+4.51J	K3	III	193046	18676						
391	4 BET	PSC FUM AL SAMAKAH	23	C1	19.862	+03	33	01.25	+4.51B	B5	V E	217891	127934						
405	59 -8 SGR	TEREBELLUM II	19	53	52.375	-27	19	14.61	+4.52C	GK3		188742							
534	1CO LAM	VIR KAMBALIA	14	16	23.359	-13	08	3C.89	+4.52D	AB		125331	158489						
77	73 PSI	BOO AULAC AL-NAT-HLAT	15	02	19.094	+27	03	29.75	+4.52J	K2	III	1335582	83645						
73	17 KAP-2 BCG	TERTIUS ASELLUS (A)	14	11	41.518	+52	01	23.55	+4.52C	A1	IV	124675A	29046	D					
484	24 -D UMA	ALT-IIBA VII	09	29	05.819	+70	03	06.47	+4.52	S2	IV	82210	8897						
281	32 IAU-2 HYA	UKOAH II	09	25	45.987	-00	57	47.98	+4.52E	A3	III	82446	136932						
512	30 PHI	UMA AL-HAUD VII	09	48	43.042	+54	17	56.59	L	A3	S	852354B	27403	D					
369	62 IAU	PES SALM	23	18	09.355	+23	27	59.22	+4.58C	A5	IV	220061A	91186						
387	54 MU	PHE ALRIAL II	00	39	58.031	-46	21	33.10	+4.59J	G8	III	3919	215194						
217	58 DRA	TAIS I	19	20	24.886	+65	37	05.16	+4.59J	A2	IV	182564	18239						
280	31 IAU-1 HYA	UKOAH I	09	26	36.618	-62	32	58.04	+4.59J	F6	V	91937A	136895						
330	42 -C ORI	HIZAN BATIL I	05	32	55.515	-04	52	1C.72	L	+4.59C	B2	III	37018A	13232C	D				
269	24 OME	CUJAM	16	23	06.163	+14	08	49.24	+4.59D	AO	P	149112A	102153	D					
506	4 PI -2 UMA	ALTHIBA III	08	35	51.916	+64	30	16.82	+4.59J	K2	III	77108	14616						
37	5 GAM-2 ARI	MESARTIM (A)	01	50	46.872	+19	02	51.87	+4.59J	S9	V	11503A	92691	D					
224	31 PSI-1 DRA	DZIBAN I	17	92	49.382	+72	10	26.21	+4.59J	F5	IV-V	162003A	8893	D					
315	5 EPS-2 LYR	DOUBLE DOUBLE II	18	42	43.325	+39	33	33.99	L	+4.59J	A3	+45	173607/BCD	67315	D				
340	41 THE-1 ORI	TRAPEZIUM	05	32	48.995	-05	25	16.22	N	+4.6CC	06	+80.5	37020-3ABC	132314	C				
382	28 OME	PER GORGONEA QUARTA	03	08	03.667	+39	23	23.39	N	+4.613	K0	III	19656	56224					
353	36 UPS	ORI THABIT	05	29	3C.EC7	-07	20	12.67	+4.616	B0	V	36512	132222						
455	63 THE-1 SCA	ALYA (A)	18	53	43.916	+04	09.	13.25	+4.622	A5	V	175638A	124068	D					

TABLE 6 CONTINUED  
STAR NAMES AND STAR DATA ORDERED BY VISUAL MAGNITUDE

NUMBER	STAR DESIGNATION	STAR PROPER NAME	RT. ASCEN.			CECLINATION			P VISUAL MAG.	V SPECTRAL CLASS	N HENRY DRAPER CAT. NO.	SAO* CAT. NO.	STAR PROP.	
			-HR	MIN	SEC	DEG	MIN	SEC						
282	72	LEO	ZUBRAY	11	12	32.837	+23	22	05.98	+4.625	M3	III	91718	81736
400	-K-2	PUP	MERKEB (3)	07	36	46.820	-26	41	19.88	+4.629	S	33	61556BC	174199
39	EPS	ARI	AL BUTAIN III	C2	56	20.625	+21	C8	29.91	L	A2	V	18515/GAB	75673
31	35	ARI	BARANI II	02	40	30.651	+27	29	44.29	+4.650	S3	V	16908	75532
13	52	PI	AGR SEAT	22	22	43.381	+01	01	22.81	+4.650	S1	V PE	21251	127520
194	80	PI -1	CYR AZELFAGE	21	40	19.352	+50	57	39.10	+4.665	S3	IV	20667	33665
510	14	TAU	UMA AL-JAUO II	09	C6	49.121	+63	43	07.22	+4.666	A7	H	78362/34	14796
347	7	PI -1	ORI AL TAJ IV	04	52	08.440	+10	04	22.53	+4.670	A0	V	31295	94201
80	43	GAM	ASCELLUS BOREALIS (8)	08	40	23.72	+21	38	58.82	+4.670	A1	V	74198	80378
36	5	GAM-1	ARI MESARTIM (8)	01	50	46.955	+13	03	06.11	+4.673	S	A1 P	115028	92680
219	61	SIG	DRA ALSAFI	19	32	27.585	+69	34	34.11	+4.666	K0	P	185144	16396
379	22	PI	GORGONEA SECUNDA	02	55	33.225	+33	27	50.67	+4.697	A2	V	18411	56047
148	91	LAM	CET MENKAB	02	57	01.671	+08	42	33.91	+4.697	B5	III	18604	110889
426	58	QME	SGR TERESULUM I	19	52	46.744	-26	01	47.47	+4.700	DGS		188376	168722
51	15	LAM	AUR AL-HIBA II	C5	15	37.211	+40	03	24.51	+4.710	G0	V	34411A	40233
345	4	OMI-1	ORI AL KUHM I	04	49	42.058	+14	10	08.31	+4.720	M3	S	30959	94176
16	6	MU	AGR ALBULAN I	20	49	51.974	-09	10	19.76	+4.723	AB	W	198743	144895
48	31	OMI	AGR SADALHULK	22	00	43.657	-22	23	51.13	+4.745	B8	V E	203409	145837
155	76	SIG	CET SADR AL-KAITOS III	02	29	42.548	-15	21	47.46	+4.746	F5	IV-V	15798	146445
159	17	PHI-1	CET AL-NIT-4H I	00	41	40.021	-10	52	53.49	+4.750	K0	III	4189	147423
71	101	B00	SECUNDUS ASELLUS	18	14	23.673	+51	35	49.53	+4.750	A1	V	125161A	29071
111	8	NU	CAP AL-SAYAT	20	17	53.485	-12	55	04.49	+4.753	S3	V	193432A	163468
507	8	RHO	UMA AL-HIBA IV	08	58	03.973	+62	49	35.51	+4.757	M3	IIIIB	16821	14742
243	2	TAU-2	ERI ANGETEAR	02	49	46.150	-21	12	32.91	+4.763	K0	III	17824A	168094
55	50	PSI-2	AUR DCLGNES III	06	35	45.763	+42	32	06.13	+4.786	K3	III	47114	41239
248	65	PSI	ERI KURSI AL-JAUZA-I	04	59	00.759	-07	14	44.99	+4.795	S2	V	32249	13170C
509	13	SIG-2	UMA AL-HIBA VI	09	36	01.131	+67	20	21.67	C	F7	IV-V	79154AE	14788
331	43	-D	ORI MIZAN BATIL III	05	36	27.836	-07	14	21.42	+4.797	A4	IV	37507	132411
233	13	ZEI	ERI ZIBAL	C3	13	24.143	-09	00	15.50	+4.798	A7	H	20320	130387
636	105	PHI	VIR ALGAFAR II	14	25	37.362	-02	00	17.25	+4.798	G2	III	126968AB	139951
226	28	OMI	DRA ADLIB II	17	37	14.448	+68	46	52.48	+4.800	F5	V	160922	17576
433	101-2	SCO	VANANT	17	46	41.171	-40	04	35.09	+4.800	CA3		228466	0
368	43	OMI	PEG SADAMAIAR	22	39	24.327	+29	02	46.12	+4.807	A1	V	214994	90717
221	52	UPS	DRA AT-HAFI I	18	55	00.917	+71	13	50.82	+4.810	K0	III	176524	9283
465	18	-E	UMA AL-JAUO III	09	12	36.226	+54	13	47.19	+4.818	A5	V	79439	27191
417	32	NU -1	SGR AIN AL RAMI I	18	51	09.064	-22	48	29.54	+4.820	CK2		174974AB	187426
404	60	A	SGR TEREBALUM III	19	55	54.576	-26	19	51.29	+4.830	GG5		189005	188778
185	34	P	CYG REVENIA OF THE SWAN	20	15	56.500	+37	52	35.55	+4.830	* B	P	193237	69773
193	83	EPS	CET SADR AL-KAITOS III	02	37	08.592	-12	05	00.35	+4.837	F5	IV-V	16620AB	148528
366	22	NU	PEG AL FARAS	22	03	09.442	+04	48	48.17	+4.840	K4	III	209747	127285
425	42	PSI	AL KILACAH	19	12	28.542	-25	20	40.58	+4.850	DFF5		175950AB	187882
52	11	MU	AL-HIBA I	05	10	00.157	+38	25	38.27	+4.860	A	H	33641	57755
6	46	XI	AND AGHIL	01	19	23.103	+45	16	02.87	+4.867	K0	III-IV	8207	37155
215	25	NU -2	DRA ALWAID (A)	17	31	16.719	+55	12	22.82	+4.877	A	H	159560A	148385
154	72	RHO	CET SADR AL-KAITOS I	02	23	31.955	-12	30	54.30	+4.880	B9	V	15130	187447
214	24	NU -1	DRA ALWAID (B)	17	31	11.293	+55	13	04.07	+4.880	A	H	1595418	30447
308	16	LWN	DOLONES X	E6	53	58.335	+45	09	40.72	+4.885	50973		41463	
40	58	ZEI	ARI AL BUTAIN IV	03	12	01.326	+20	51	37.93	+4.897	20150		75810	
429	8	BEI-2	SCO GRAFFIAS (C)	16	02	31.857	-19	40	00.07	+4.902	B2	V	184218C	159683
213	21	MU	DRA ALRAKIS	17	04	17.357	+54	32	07.95	L	F5		154905/GAB	30239

TABLE 6 CONTINUED  
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			0	45	90	0	45	90						
521	21 ETA	UM J ANNA FARKADAIN	16	18	56.288	+75	52	16.64	+4.927	DAB	148048	8470		
477	52 PHI	TAU ALKALBAIN I	04	17	16.436	+27	13	58.39	+4.9350	K1	273824	76558	D	
54	46 PSI-1	AUR DOLONES I	06	21	02.980	+99	18	56.31	+4.935C	M0	41076	44537		
195	45 OME-1	CYG RUCBA	20	28	30.510	+49	46	51.97	+4.9353	B2	19555648	49712	D	
388	NU	PHE ARLIA I	01	12	55.956	-45	47	53.12	+4.9353	F8	7520	215428		
456	63 THE-2	SCA ALYA (B)	18	53	45.220	+04	08	01.70	+4.9375	A5	1756398	124070	D	
53	21 SIG	AUR AL-HIBA III	05	21	15.050	+37	20	26.65	+4.9387	K4	35186	57981	D	
100	18 MU	CHI ISIS	06	53	49.03	-13	59	38.75	+4.9390	G5	51250/1AB	152123	D	
918	35 NU-2	SGR AIN AL RAMI II	18	52	05.166	-22	44	06.95	+4.9395	K1	175190	187445		
267	7 KAP-1	HER MARSIC	16	05	48.939	+17	10	43.81	+5.0000	G8	145001A	101951	D	
60	58 PSI-7	AUR DOLNES VII	06	47	33.920	+01	50	32.21	+5.005	K3	49520	4138C		
164	16 THE	COL KURUD I	06	05	48.671	-37	14	41.29	+5.010	B9	42167	196514		
516	11 GAM-3	UM PHERKA MINOR	15	17	07.110	+02	00	1.98	+5.022	K4	136726	8207		
423	47 CHI-1	SGR NAMALSADIRA+ III	19	22	14.012	-24	36	26.63	+5.0220	D45	18235948	188101	D	
15	63 KAP	AGR STIULAS	22	35	10.023	-04	29	11.39	+5.0225	K2	214376	146210		
57	55 PSI-9	AUR DOLONES IV	06	39	26.746	+44	34	29.11	+5.0227	K5	479314	41288		
314	4 EPS-1	LVR DOUBLE DOUBLE I (A)	18	42	40.873	+33	37	00.69	+5.044C	S	1735828	67310	C	
963	28 BU	TAU PLEIONE	03	46	12.391	+23	59	07.56	+5.047	88	23862	76229		
83	16 ZET-3	CNC TEGMINE (AB)	08	69	20.753	+17	47	55.93	+5.050C	F8	68256/1AB	97645	C	
277	38 KAP	HYA AL-SHARASIF I	09	37	54.469	-14	06	16.63	+5.0558	B5	83754	155388		
203	27 -F	DRA ADVAR ALDIB I	17	32	C9.543	+68	10	01.00	+5.060C	K0	159966	17526		
341	43 THE-2	ORI HIZAN BATIL II	05	32	55.443	-05	26	50.72	+5.077	09.5V P	370414	132321	D	
452	13 DEL-1	SCP NASAK YAMANI I (B)	15	32	24.613	+10	42	12.66	+5.1C9	S	138917B	1C1623	D	
319	2 MU	LVR AT-4-FAR	18	22	34.868	+39	28	43.95	+5.110	A3	169702	66943		
168	6 BET-2	CYG ALBIRO (B)	19	28	44.352	+27	51	32.69	+5.11C	B8	181914B	87302	C	
88	77 XI	CNC NAM-N	09	06	29.215	+22	14	55.95	+5.140	K0	79515	80666		
198	12 GAM-1	DEL AL-SALIB (B)	20	44	19.473	+15	56	34.71	+5.140	F7	197953B	1C6475	C	
508	11 SIG-1	UMA AL-THI'A V	09	04	01.998	+67	04	31.26	+5.147	K5	77800	147769		
302	8 ALP-1	LIB ZUBENELGENUBI I	19	47	54.559	-15	47	25.50	+5.153	F5	13C815B	158836	D	
122	30 MU	CAS AL MARFAK	01	04	55.686	+54	40	32.95	+5.163	G5	6592	22024		
159	19 PHI-2	CET AL-NIT-TAM II	00	47	37.288	-10	54	41.65	+5.188	F8	4813	147470		
332	6 -G	ORI MANICA	04	52	00.305	+11	20	45.39	+5.190	A3	31283	94197		
56	52 PSI-3	AUR DOLONES II	06	35	20.296	+39	56	51.00	+5.2CC	B8	47100	59319		
59	57 PSI-6	AUR DOLONES VI	06	43	50.996	+48	50	40.15	+5.210	K1	48781	41346		
393	86 ZEI-1	PSC KUTCH II	01	11	06.923	+07	18	41.34	+5.215	FO	7344A	1C9739	C	
58	56 PSI-5	AUR DOLONES V	06	43	08.206	+43	37	45.74	+5.240	G0	486382A	41330	D	
76	59 PHI	CEGIUS	15	36	01.742	+40	30	55.00	+5.24C	S8	139641	45643		
242	10 RHO-3	ERI ALUD-I III	03	01	48.952	-07	97	43.01	+5.257	A3	19107	130269		
2	49 A	AND THAIL	01	27	05.5C5	+46	45	0C.17	+5.26C	K0	9057	37275		
475	67 KAP-2	TAU ALKALBAIN IV	04	22	26.032	+22	05	13.93	+5.280	A1	21946	76602		
306	21 NU	ZUBEN-HAKRABI	15	03	43.923	-16	03	51.08	+5.28C	K5	133774	159028		
30	33 ARI	BARANI I	02	37	45.345	+26	50	50.75	+5.295	A3	16628A	175510	D	
160	22 PHI-3	CET AL-NITHAM III	00	53	31.022	-11	32	13.03	+5.3FC	K9	5437	147519		
241	9 RHO-2	ERI ALUD-II II	03	00	14.892	-07	52	51.03	+5.310	G66	1895343	130254	D	
92	42 PI	ARI AL BUTAIN I	02	46	29.805	+17	15	21.66	+5.34C	B6	17543A	93127	D	
478	59 CHI	TAU ALKALBAIN II	04	19	32.079	+25	30	46.87	+5.390	B9.5V	276384	76573	C	
305	44 ETA	LIB ZUBAN AL KRAVI	15	41	15.348	-15	30	53.77	+5.4CC	FO	140417	159466		
424	49 CHI-2	SGR NAMALSADIRA- IV	19	22	28.163	-24	03	41.16	+5.420	K4	182416	188105		
457	16 TAU CALAENO	03	41	49.528	+24	08	01.54	+5.455	B7	23288	76126			
166	21 UU	KISSIN	12	28	30.930	+24	50	35.99	+5.455	A3	109945	82346		

TABLE 6 CONTINUED  
STAR NAMES AND STAR DATA ORDERED BY VISUAL MAGNITUDE

NUMBER	STAR DESIGNATION	PROPER NAME	RT. ASCEN. HR MIN SEC			DECLINATION DEG MIN SEC			VISUAL MAG. N	SPECTRAL CLASS N	SAO • HENRY DRAPER (4-D) CAT. NO.	CAT. NO. • STAR PROP.	
			C8	08 09 08	01 83	06 13 01	03 71	05 465					
483	2 A UMA	ALTHIBA I	17	12 22 27	49 14	26 43	71	05 467 S	DF5	156058	1459C	102681 D	
263	64 ALP-2 HER	RASALGET-1 (B)	C2	53 36 47	19 17	49 30	02	05 55C *	DF5	18256	92195		
43	96 RHO ARI	AL BUTAIN II	22	23 27 43	67 8	34 03	36	05 55C *	A2	213799	10402		
138	29 RHO CEP	KAL BALRAI	C9	32 02 51	-05 41	26 52	02	05 55C *	GK1	82870	136964		
270	33 A LVA	UKDAH III	13	03 37 46	45 32	07 73	03	05 600 *	K1	113947	44465	D	
99	12 ALP-1 CVN	LA SUPERBA	12	53 46 23	36 35	03 82	02	05 61C	FO	1121128	63256	D	
90	505 3 PI -1 UMA	COR CARCLI (B)	09	34 46 70	03 65	11 44	92	05 625	FO	72905	14609		
41	34 MU ARI	ALTHIBA II	02	39 32 48	01 15	47 58	68	05 66C *	AC	16811	93062	C	
63	38 -H BOO	MERGA	14	47 31 67	11 46	19 25	56	05 66C *	DF4	*	1303945	45226	
202	202 DRA	ALRUBAH	17	42 56 40	53 43	15 34	34	05 71C *	40	161693	30536		
317	7 ZET-2 LYR	NASR ALLAKAI II	18	43 04 77	79 37	32 23	33	05 730	FO	IV	67324	D	
240	6 RHO-1 ERI	ALUD-1 I	02	58 42 36	-07 51	31 98	45	05 745	DG6	18794	130243		
62	62 PSI-3 AUR	DOLONES IX	06	50 48 89	04 56	20 23	53	05 750	*	88	IV	50568	41446
460	21 TAU STERICPE I	03 42 55 10	+02 24	24 00	00	+05 57	08	V	IV	24432	76159		
161	23 PHI-4 CET	ALNTI-TAM IV	00	56 13 58	-31 38	58 40	40	05 790	GG7	*	5722	14546	
170	170 R CRB	VARIABLES CORONAE	15	46 30 95	+28 19	32 24	24	05 80C *	F	PEP	*	14527	84015
225	31 PSI-2 DRA	DZISAN II	17	42 50 92	+02 10	55 33	33	05 805	F9	V	1620048	8891	
87	19 LAM CNC	PIAUOS	08	17 33 92	+02 10	52 39	39	05 810	*	B9	V	70011	60113
381	7 CHI PER	MISAM AL THURAYYA I	02	14 32 31	16 57	11 09	57	05 890	G5	II	13994A	23149	
297	297 R LEP	CRIMSON STAR	C4	57 18 27	-14 52	47 48	48	06 00C *	C7	QE	*	31916	150058
313	4 EPS-1 LYR	DOUBLE DOUBLE I (B)	18	42 40 36	+03 37	03 40	40	06 001	S	A4	*	17353A	1C574C
107	107 BEI-1 CAP	DABIL MINOR	20	17 58 47	-14 56	38 31	31	06 16C	B9	19342AB	163471		
84	16 ZET-2 CNC	TEGMINE 1C)	08	09 21 21	13 +17	47 58	39	06 22D	DF2	69 25C	97646	C	
61	61 PSI-8 AUR	DOLCNES VIII	06	50 31 47	18 34	05 87	87	06 29C	*	B9	P	50204	59589
438	438 NU -1 SCO	JABBAA-1 (3)	16	09 03 49	-19 19	17 45	L	06 263	AD	IV	14591C0	159763	
394	86 ZET-2 PSC	KUTON III	01	11 08 24	07 18	52 03	03	06 27C	F6	V	13448C	0	
82	41 EPS CNC	ALMALAF	09	37 35 06	8 +19	43 23	07	06 30D	A6	III	7331	98024	
135	17 XI -1 CEP	KUR-YAH (B)	22	02 19 44	23 03	01 30	30	06 354	A	H	209700B	19826	
461	461 22 TAU	STEROPE II	03	43 03 46	+02 22	44 24	39	06 430	*	39 5V	23441	76154	
482	482 UMA	FLYING STAR	11	50 06 18	04 38	04 35	16	06 451	GB	V P	103055	62738	
85	49 IOI-1 CNC	ZUBANA-1 (B)	08	43 39 35	+28 56	57 95	50	06 570	A3	V	747398	60415	
371	371 -H PER	MISAM AL THURAYYA II	C2	15 42 51	13 *56	56 22	44	06 645	B2	IA	16163A	23182	
72	17 KAP-1 BOO	TERTIUS ASELLUS (B)	14	11 40 21	+52 01	15 47	07	06 698	F2	V	1246748	23045	
441	441 XI -2 SCO	GRASSIAS (B)	16	C1 37 39	-11 14	06 07	07	07 35C	D37	C	159666	D	
398	398 XI -2 PSA	FUM AL HUT II	22	29 40 35	-32 36	41 57	57	07 559	S	MD	213884	D	
389	389 PIC	KAPTEYN'S STAR	05	09 41 46	-44 59	53 25	25	08 85C	*	33193	B	217223	

TABLE 7  
APPROXIMATE TRANSLATION OF STAR NAME

NUMBER	PROPER NAME	REF.	DER.	TRANSLATION
1	NEMBUS	2	(L)	CLOUD?
2	THAIL	2	(A)	TRAIN OF A GARMENT
3	ALPHERAT Z	1	(A)	THE HORSE'S NAVEL
4	MIRACH	1	(A)	GIRDLE OR WAIST-COAT
5	ALMACH	1	(A)	AN ARABIAN BADGER
6	ADHL	2	(A)	TRAIN OF A GARMENT
7	SADALMELIK	1	(A)	LUCKY ONE OF THE KING
8	SADALSUUD	1	(A)	LUCKIEST OF THE LUCKY
9	SADACHBIA	1	(A)	FELICITY OF TENTS
10	SKAT	2	(A)	A WISH
11	ALBALI	1	(A)	THE BRIGHTEST ONE
12	ALSAO (B)	2	(A)	THE LUCKY ONE
13	ALSAO (A)	2	(A)	THE LUCKY ONE
14	ANCHAS	1	(L)	THE HIP
15	SITULA	2	(L)	WATER-JAR
16	ALBULAN I	2	(A)	THE SWALLOWERS
17	ALBULAN II	2	(A)	THE SWALLOWERS
18	SADALMULK	2	(A)	LUCKY ONE OF THE KINGDOM
19	SEAT	2	(N)	{A TENT OF THE LUCKY ONE}
20	ALTAIR	1	(A)	THE EAGLE
21	ALSHAIN	1	(P)	FALCON
22	TARAZED	1	(P)	STAR-STRIKING
23	ALMIZAN I	2	(A)	SCALE-BEAM
24	DHANB AL OKAB	2	(A)	EAGLE'S TAIL
25	DENEK OKAB	2	(A)	EAGLE'S TAIL
26	ALMIZAN II	2	(A)	SCALE-BEAM
27	ALMIZAN III	2	(A)	SCALE-BEAM
28	AL THALIMAIN II	2	(A)	TWO OSTRICHES
29	AL THALIMAIN I	2	(A)	TWO OSTRICHES
30	BARANI I	2	(P)	BEARER
31	BARANI II	2	(P)	BEARER
32	BARANI III	2	(P)	BEARER
33	NAIR AL BUTAIN	2	(A)	BRIGHT ONE OF THE LITTLE BELLY
34	HAMAL	1	(A)	SHEEP
35	SFERATAN	1	(A)	A SIGN
36	MESARTIM (B)	1	(H)	MINISTERS
37	MESARTIM (A)	1	(H)	MINISTERS
38	BOEIN	2	(A)	BELLIES
39	AL BUTAIN III	2	(A)	BELLIES
40	AL BUTAIN IV	2	(A)	BELLIES
41	KOLEON	2	(C)	SCARBORG
42	AL BUTAIN I	2	(A)	BELLIES
43	AL BUTAIN II	2	(A)	BELLIES
44	CAPELLA	1	(L)	LITTLE SHE-GOAT
45	MENKALINAN	1	(A)	SHOULDER OF THE REIN-HOLDER
46	ALANZ	2	(A)	THE GOAT
47	HAEOUS I	2	(L)	THE KIDS
48	HAEOUS II	2	(L)	THE KIDS
49	MAJASIM	2	(A)	WRIST
50	KASLINAN	2	(A)	THE HEEL OF THE REIN-HOLDER

TABLE 7 CONTINUED  
APPROXIMATE TRANSLATION OF STAR NAME

NUMBER	PROPER NAME	REF.	DER.	TRANSLATION
51	AL-TIBA II	2	(A)	THE TENT
52	AL-TIBA I	2	(A)	THE TENT
53	AL-TIBA III	2	(A)	THE TENT
54	DOLONES I	2	(L)	GOADS
55	DOLONES III	2	(L)	GOADS
56	DOLONES II	2	(L)	GOADS
57	DOLONES IV	2	(L)	GOADS
58	DOLONES V	2	(L)	GOADS
59	DOLONES VI	2	(L)	GOADS
60	DOLONES VII	2	(L)	GOADS
61	DOLONES VIII	2	(L)	GOADS
62	DOLONES IX	2	(L)	GOADS
63	MERGA	2	(L)	GOADS
64	ARCIURUS	1	(A)	BEAR-MATCHER
65	NEKKAR	1	(A)	THE DIGGER
66	SEGINUS	1	(L)	CYGNUS, SON OF MARS
67	THIBA	2	(A)	FEMALE WOLVES
68	IZAR	1	(A)	THE CIRCLE
69	MUP-4RID	1	(A)	SOLITARY STAR
70	PRIMUS ASELLUS	2	(L)	FIRST ASS COLT
71	SECUNDUS ASELLUS	2	(L)	SECOND ASS COLT
72	TERTIUS ASELLUS (B)	2	(L)	THIRD ASS COLT
73	TERTIUS ASELLUS (A)	2	(L)	TAIRO ASS COLT
74	AULAD AL-TIBA	2	(A)	WHELP OF THE WOLVES
75	ALKALUROPS	2	(A)	HERDSMAN'S CLUB
76	CEGINUS	3	(L)	CYGNUS, SON OF MARS
77	AULAD AL-NAT-LAT	2	(A)	LOW LITTLE ONES
78	ACUBENS	1	(A)	THE CLAWS
79	AL TARF	2	(A)	THE END
80	ASCELLUS BCREALIS	1	(L)	NORTHERN ASS COLT
81	ASCELLUS AUSTRALIS	1	(L)	SOUTHERN ASS COLT
82	ALMALAF	2	(A)	THE STALL
83	TEGMINE (AB)	2	(L)	IN THE COVERING
84	TEGMINE (C)	2	(L)	IN THE COVERING
85	ZUBANA-I (B)	2	(A)	THE CLAWS
86	ZUBANA-I (A)	2	(A)	THE CLAWS
87	PIAUTOS	2	(C)	THE EYE
88	NA-IN	2	(P)	THE NOSE
89	LA SUPERBA	2	(L)	SUPERB ONE
90	COR CAROLI (B)	1	(L)	KING CHARLES
91	COR CAROLI (A)	1	(L)	DEAR TO THE HEART OF HER MASTER
92	CHARA	1	(G)	DOG-STAR
93	SIRIUS	1	(A)	THE ANNOUNCER
94	MIRZAM	2	(A)	THE ANNOUNCER
95	MIRZA	2	(A)	WEIGHT
96	WEZEN	1	(A)	THE VIRGINS
97	AD-HARA	1	(A)	THE APES
98	FURUD	1	(A)	THE VIRGIN
99	ALUDRA	2	(W)	EGYPTIAN SUCCESS
100	ISIS			

TABLE 7 CONTINUED  
APPROXIMATE TRANSLATION OF STAR NAME

NUMBER	PROPER NAME	REF.	DER.	TRANSLATION	
				VIRGINS	(A) THE VIRGINS
101	UCRA	2			1 (A) ARISING BEFORE HIS COMPANION
102	AL ZARA	2			1 (A) FIRST GOAT
103	PROCYON	1			2 (A) SECOND GOAT
104	SOMEISA	1			2 (A) SLAUGHTERS
105	PRIMA STEDI	2			2 (A) SLAUGHTERS
106	SECUNDA STEDI	2			1 (A) FORTUNATE ONE
107	DABIH MINOR	2			1 (A) TAIL OF THE GOAT
108	DABIH MAJOR	2			2 (A) THE SHEEP
109	NAS-HIRA	1			1 (A) A GREEK NAVIGATOR
110	DENE'S AL-JEDDI	1			1 (N) WATER?
111	AL SHAT	1			1 (N) ?
112	CANOPUS	1			1 (A) ORNAMENTAL APLUSTRE
113	MIAPLACIDUS	1			1 (A) THE BREAST
114	AVIOR	1			1 (A) HANG
115	ASPIDISKE	1			1 (A) THE KNEE
116	SCEDAR	1			3 (A) CYCLOPS, SON OF MARS
117	CAP-i	1			2 (A) ELBOW
118	NAVI	1			2 (A) THE ELBOW
119	RUC-BAY-i	1			1 (A) CENTAUR'S FOOT
120	SEGIN	1			1 (A) GROUND
121	MARFAK	2			1 (A) THE CAT'S BELLY
122	AL MARFAK	2			1 (A) CENTAUR'S NOSE
123	RIGIL KENTAUROS	1			1 (A) THE RIGHT ARM
124	JADAR	1			1 (A) A FLOCK
125	MULIFAIN	1			1 (A) THE SHEPHERD
126	BATEN KENTAUROS	2			2 (A) STARS OF THE FLOCK
127	MENKENT	1			2 (A) THE POT
128	ALDERAMIN	1			2 (A) THE SHEEP
129	ALFIRK	1			3 (A) BLAZE IN THE FACE OF A HORSE
130	ERRAI	1			1 (A) BLAZE IN THE FACE OF A HORSE
131	KABALFI'D	2			2 (A) PART OF A HAND
132	AL KIDR	2			2 (A) PART OF A HAND
133	AL AS-NAM I	2			2 (A) WHALE'S BREAST
134	ERAKIS	3			1 (A) WHALE'S BELLY
135	KUR-MAH (B)	1			2 (A) SOUTHERN TAIL
136	KUR-JAH (A)	1			2 (A) HEN OSTRICHES
137	AL AGH-NAM II	1			2 (A) NORTHERN TAIL
138	KALBALRAI	2			2 (A) NORTHERN NOSE
139	MENKAR	1			2 (A) NORTHERN NOSE
140	DENE'S KAIOS	1			1 (A) TAIL OF THE WHALE
141	KAFALSIDMA	2			2 (A) WHALE'S BREAST
142	AL KAFF AL JID-MAH III	2			1 (A) WHALE'S BELLY
143	SADR AL KAIOS III	2			2 (A) SOUTHERN TAIL
144	BATEN KAIOS	1			2 (A) HEN OSTRICHES
145	DENE'S ALGENEBUL	2			2 (A) NORTHERN NOSE
146	AL NAYMAT I	2			2 (A) PART OF A HAND
147	SCHEMALI	2			2 (A) PART OF A HAND
148	MENKAB	2			2 (A) WHALE'S BREAST
149	AL KAFF AL JID-MAH IV	2			1 (A) WHALE'S BELLY
150	AL KAFF AL JID-MAH I	2			2 (A) SOUTHERN TAIL

TABLE 7 CONTINUED  
APPROXIMATE TRANSLATION OF STAR NAME

NUMBER	PROPER NAME	REF.	DER.	TRANSLATION
151	AL KAFF AL JIDHAY II	2	(A)	PART OF A HAND
152	MIRA	1	(L)	VARIABLE
153	SADR AL KAITOS I V	2	(A)	WHALE'S BREAST
154	SADR AL KAITOS I	2	(A)	WHALE'S BREAST
155	SADR AL KAITOS II	2	(A)	WHALE'S BREAST
156	AL NAYMAT II	2	(A)	HEN STRICHES
157	AL NAYMAT III	2	(A)	HEN STRICHES
158	ALNITHAM I	2	(A)	THE NECKLACE
159	ALNITHAM II	2	(A)	THE NECKLACE
160	ALNITHAM III	2	(A)	THE NECKLACE
161	ALNITHAM IV	2	(A)	THE NECKLACE
162	PHACT	1	(N)	GROUND?
163	WAZN	1	(A)	WEIGHT
164	KURUD I	2	(A)	APES
165	KURUD II	2	(A)	APES
166	KISSIN	2	(L)	A SPECIES OF IVY
167	DIADEM	3	(I)	CROWN
168	AL DAFIRAH	2	(A)	COARSE HAIR IN THE TAIL OF THE LION
169	ALFECCA MERIOIANA	2	(L)	MIDDLE OF THE DISK
170	VARIABLEIS CORONAE	2	(L)	VARIABLE ONE OF THE CROWN
171	BLAZE STAR	2	(T)	THE DISH
172	ALPHECCA	1	(A)	BOWL
173	NUSAKAN	1	(A)	THE TENT
174	ALCIBIA	1	(A)	CRAB?
175	KRAZ	3	(N)	WING
176	SIENAH	1	(A)	THE RAVEN
177	ALSGRAB	3	(A)	BEAK
178	MINKAR	1	(A)	A SHALLOW BASIN
179	ALKES	1	(A)	THE RIBS
180	AL SHARASIF II	2	(A)	COINED FROM ALPHA CRUX
191	ACRUX (A)	1	(A)	COINED FROM ALPHA CRUX
192	ACRUX (B)	1	(A)	GENUS OF LEGUMINOUS TREES OR SHRUBS
193	MIMOSA	1	(L)	COINED FROM GAMMA CRUX
194	SACRUX	1	(D)	REVENGE OF THE SWAN
195	DENE9	2	(D)	TAIL
197	ALBIREO (A)	1	(L)	?
188	ALBIREO (B)	1	(L)	?
189	SAOR	1	(A)	BREAST
190	FAWARIS II	2	(A)	RIDERS
191	AL JANAH	2	(A)	THE WING
192	FAWARIS III	2	(A)	RIDERS
193	FAWARIS I	2	(A)	TAIL OF THE HEN
194	AZELFASE	2	(A)	VENATOR BACKWARDS
135	RUCBA	2	(A)	THE CROSS
196	SVALCCIN	2	(L)	NICOLAUS BACKWARDS
197	ROTANEV	2	(L)	THE CROSS
198	AL SALIB (E)	2	(A)	THE CROSS
199	AL SALIB (A)	2	(A)	THE PEARLS
200	AL UKUD	2	(A)	THE PEARLS

TABLE 7 CONTINUED  
APPROXIMATE TRANSLATION OF STAR NAME

NUMBER	PROPER NAME	REF.	DER.	TRANSLATION
201	DENE B DULFIM	2	(A)	TAIL OF THE DOLPHIN
202	ALRUBAH	2	(A)	THE KNEE
203	ADFAR ALDIB I	2	(A)	HYAENA'S CLAWS
204	THUBAN	1	(A)	DRAGON
205	RASTABAN	1	(A)	DRAGON'S HEAD
206	ELTANTIN	1	(A)	DRAGON'S HEAD
207	ALTATIS	1	(A)	THE GOAT
208	TYL	3	(N)	?
209	DHIBAH	2	(A)	HYAENAS
210	OHIBAIN	2	(A)	TWO HYAENAS
211	EDASICHE	1	(A)	MALE HYAENA
212	GIAUSAR	1	(P)	POISON PLACE
213	ALRAKIS	1	(A)	TROTTING CAMEL
214	ALWAID (B)	2	(A)	THE MOTHER CAMELS
215	ALWAID (A)	2	(A)	THE MOTHER CAMELS
216	GRUMIUM	1	(U)	DRAGON'S UNDER JAW
217	TAIS I	2	(A)	GOAT
218	TAIS II	2	(A)	TRIPODS OF AN OPEN AIR KITCHEN
219	ALSAFI	2	(A)	TRIPODS OF AN OPEN AIR KITCHEN
220	ATHAFI II	2	(A)	TRIPODS OF AN OPEN AIR KITCHEN
221	ATHAFI I	2	(A)	TRIPODS OF AN OPEN AIR KITCHEN
222	ALO-JIBA	2	(A)	HYAENA
223	ALAHAMAN	2	(A)	TWO BLACK BULLS
224	DOZIBAN I	2	(A)	TWO HYAENAS
225	DOZIBAN II	2	(A)	TWO HYAENAS
226	ADFAR ALDIB II	2	(A)	HYAENA'S CLAWS
227	KITALPHA	1	(A)	PART OF A HORSE
228	SCEP TRUM	3	(L)	SCEPTR
229	ACHERNAR	1	(A)	END OF THE RIVER
230	CURSA	1	(A)	CHAIR
231	ZAURAK	1	(A)	BRIGHT ONE OF THE BOAT
232	RANA	3	(U)	FROG
233	ZIBAL	2	(A)	YOUNG OSTRICHES
234	AZHA	1	(A)	OSTRICH'S NEST
235	ACAHAR (A)	1	(A)	END OF THE RIVER
236	ACAHAR (B)	1	(A)	END OF THE RIVER
237	KURSI AL JAUZAH II	2	(A)	CHAIR OF THE CENTRAL ONE
238	BEID	1	(A)	EGG
239	KEID	1	(A)	EGG-SHELLS
240	ALUDHI I	2	(A)	OSTRICH'S NEST
241	ALUDHI II	2	(A)	OSTRICH'S NEST
242	ALUDHI III	2	(A)	OSTRICH'S NEST
243	ANGETENAR	2	(A)	BEND IN THE RIVER
244	BEEMIM III	2	(U)	IN THE WATER
245	THEEMIN	3	(H)	IN THE WATER
246	BEEMIM II	2	(U)	IN THE WATER
247	BEEMIM I	2	(U)	IN THE WATER
248	KURSI AL JAUZAH I	2	(A)	CHAIR OF THE CENTRAL ONE
249	CASIOR	1	(L)	THE MORTAL ONE OF THE TWINS
250	POLLUX	1	(L)	THE IMMORTAL ONE OF THE TWINS

TABLE I CONTINUED  
APPROXIMATE TRANSLATION OF STAR NAME

NUMBER	PROPER NAME	REF.	DER.	TRANSLATION
251	AL-HENA	1	(A)	MARK ON THE CAMEL'S NECK
252	WASAT	1	(A)	THE MIDDLE
253	MESUSA	1	(A)	OUTSTRETCHED
254	MEKBUDA	1	(A)	CONTRACTED
255	PROPUS	1	(G)	POSITION IN FRONT OF CASTOR'S LEFT FOOT
256	CALX	2	(L)	THE HEEL
257	NUCATAI	2	(A)	CAMEL'S JUMP
258	AL-ZIRR	2	(A)	THE BUTTON
259	AL-NA-IR	1	(A)	THE BRIGHT ONE
260	DENE'B ALNA-IR	2	(A)	END OF THE TAIL
261	DENE'B HUT	2	(A)	THE TAIL OF THE FISH
262	RASALGETHI (A)	1	(A)	KNEELEER'S HEAD
263	RASALGETHI (S)	1	(A)	KNEELEER'S HEAD
264	KORNEP-HOROS	1	(G)	CLUB BEARER
265	NASAK S-SAMIYA III	2	(A)	NORTHERN BOUNDARY
266	SARIN	3	(N)	?
267	MARSIC	2	(A)	ELBOW
268	MASYM	2	(A)	WRIST
269	CUJAM	2	(L)	CLUB OF HERCULES
270	UKDAH III	2	(A)	KNOT
271	ALPHARD	1	(A)	THE SOLITARY ONE
272	MINAZAL I	2	(A)	UNINHABITED SPOT
273	MINAZAL III	2	(A)	UNINHABITED SPOT
274	MINAZAL V	2	(A)	UNINHABITED SPOT
275	MINAZAL II	2	(A)	UNINHABITED SPOT
276	UKDAY IV	2	(A)	KNOT
277	AL-SHARASIF I	2	(A)	THE RIBS
278	MINAZAL IV	2	(A)	UNINHABITED SPOT
279	MINKALS-UJJA	2	(A)	THE SNAKE'S NOSE
280	UKDAH I	2	(A)	KNOT
291	UKDAY I	2	(A)	KNOT
282	ZUBRAH	2	(A)	MANE OF THE LION
283	REGULUS	1	(L)	RULER OF THE HEAVENS
284	DENEBO LA	1	(A)	THE LION'S TAIL
285	ALGIEBA (A)	1	(L)	THE LION'S MANE
286	ALGIEBA (B)	1	(L)	THE LION'S MANE
287	ZOSMA	1	(P)	THE STICKLE
288	AL-SENUBI	2	(A)	THE SOUTHERN
289	AD-HAFERA	1	(A)	THE EYEBROWS
290	AL-JABA'AH	2	(A)	THE FORE-HEAD
291	CHERTAN	1	(A)	TWO RIBS
292	MINKARA SA'D	2	(A)	LION'S NOSE
293	ALTERF	1	(A)	THE END
294	RASALAS	1	(A)	THE LION'S HEAD TOWARD THE SOUTH
295	SUBRA	3	(N)	?
296	PRAECIPUA	2	(L)	CHIEF
297	CRIMSON STAR	2	(A)	HARE
298	ARNEB	1	(A)	THIRST-SLAKING CAMELS
299	NI'AL	1	(A)	CHAIR OF THE GIANT
300	KURSI AL-JABBAR	2	(A)	?

TABLE 7 CONTINUED  
APPROXIMATE TRANSLATION OF STAR NAME

NUMBER	PROPER NAME	REF.	DER.	TRANSLATION
301	ARS AL JAUZAH	2	(A)	THRONE OF THE CENTRAL ONE
302	ZUBENELGENUSI I	1	(A)	SOUTHERN CLAWS
303	ZUBENELGENUSI II	1	(A)	SOUTHERN CLAWS
304	ZUBENESCHAMALI	1	(A)	NORTHERN CLAWS
305	ZUBAN AL KRAVI	2	(A)	SOUTHERN CLAWS
306	ZUBEN TAKRABI	3	(A)	SOUTHERN CLAWS
307	ZUBEN ACRABII	2	(A)	SCORPION'S CLAWS
308	DOLONES X	2	(L)	GODS
309	S-AUKAH	2	(A)	THORN
310	VEGA	1	(A)	DESERT
311	SHELIAK	1	(A)	TORTOISE
312	SULAFAT	1	(A)	TORTOISE
313	DOUBLE DOUBLE I	2	(T)	EAGLE OF THE DESERT
314	DOUBLE DOUBLE I (A)	2	(T)	EAGLE OF THE DESERT
315	DOUBLE DOUBLE II	2	(T)	EAGLE OF THE DESERT
316	NASR ALWAKI I	2	(A)	EAGLE OF THE DESERT
317	NASR ALWAKI II	2	(A)	EAGLE OF THE DESERT
318	ALADFAR	2	(A)	THE TALONS
319	AT-FAR	2	(A)	THE TALONS
320	RAS ALAGUE	1	(A)	HEAD OF THE SERPENT-CARMER
321	CEBALRAT	1	(A)	HEART OF THE SERPENT-CARMER
322	MULIPHEN	2	(A)	OATH
323	MED PRICER	1	(A)	FIRST IN THE HAND
324	YEO POSTERIOR	1	(A)	BEHIND IN THE HAND
325	SAIK	2	(A)	DRIVER
326	SABIK	1	(A)	PROCEEDING ONE
327	GARAFSA	2	(P)	SERPENT-TAMER
328	MARFIK	1	(A)	ELBOW
329	AGGIA	2	(C)	MUSICIAN
330	MIZAN BATIL I	2	(A)	FALSE SCALE-BEAM
331	MIZAN BATIL III	2	(A)	FALSE SCALE-BEAM
332	MANICA	2	(L)	PROTECTING GAUNTLET
333	BETELSEUSE	1	(A)	ARM PIT OF THE CENTRAL ONE
334	RIGEL	1	(A)	LEFT LEG OF THE CENTRAL ONE
335	BELLATRIX	1	(L)	Female WARRIOR
336	MINTAKA	1	(A)	THE BELT
337	ALNILAM	1	(A)	STRING OF PEARLS
338	ALNITAK	1	(A)	THE GIRDLE
339	SAIF AL JABBAR	2	(A)	SWORD OF THE GIANT
340	TRAPEZIUM	2	(A)	FALSE SCALE-BEAM
341	MIZAN BATIL II	2	(A)	FALSE SCALE-BEAM
342	HATYSA	3	(N)	?
343	SAIPH	1	(A)	THE SWORD
344	MEISSA	1	(A)	THE PROUDLY MARCHING ONE
345	AL KUHM I	2	(A)	THE SLEEVE OF THE GARMENT
346	AL KUHM II	2	(A)	THE SLEEVE OF THE GARMENT
347	AL TAJ IV	2	(P)	THE CROWN
348	AL TAJ I	2	(P)	THE CROWN
349	TABIT	3	(A)	THE ENDLIER
350	AL TAJ II	2	(P)	THE CROWN

TABLE 7 CONTINUED  
APPROXIMATE TRANSLATION OF STAR NAME

NUMBER	PROPER NAME	REF.	DER.	TRANSLATION
351	AL TAJ III	2	(P)	THE CROWN
352	AL TAJ V	2	(P)	THE CROWN
353	THABIT	2	(A)	THE ENDURER
354	HEKA	2	(A)	WHITE SPOT
355	HIIKA	2	(A)	WHITE SPOT
356	PEACOCK	1	(A)	SADDLE
357	MARKAB	1	(A)	UPPER PART OF THE ARM
358	SCHEAT	1	(A)	THE SIDE
359	ALGENIB	1	(A)	THE NOSE
360	ENIF	1	(A)	THE LUCKY STAR OF THE HERO
361	YOMAM	1	(A)	FORTUNATE RAIN
362	MATAR	1	(A)	TWO BEASTS
363	BITAM	1	(A)	GOOD LUCK OF THE CAMEL
364	SADALNAZI	2	(A)	GOOD LUCK OF THE EXCELLENT ONE
365	SADALBARI	1	(A)	HORSE'S MOUTH
366	FUM AL FARAS	2	(A)	THE FORTUNATE STARS
367	SUUDALNUJUM	2	(A)	FORTUNATE RAIN
368	SUUDALMATAIR	2	(A)	LEATHERN BUCKET
369	SALM	2	(A)	THE BUCKET-ROPE
370	ALKARAB	2	(A)	WRIST OF THE PLEIADES
371	MISAM AL THURAYYA II	2	(A)	THE ELBOW
372	MIRFAK	1	(A)	THE DEMON
373	ALGOL	1	(A)	SPACE BETWEEN THE SHOULDERS
374	ATIK	1	(A)	WRIST
375	MIRAM	3	(A)	WRIST
376	MISAM	3	(A)	SHOULDER OF THE PLEIADES
377	MENKIS	1	(A)	SPACE BETWEEN THE SHOULDERS
378	ALATIK	2	(A)	SECOND STAR IN THE GORGON'S HEAD
379	GORGONEA SECUNDA	2	(L)	THIRD STAR IN THE GORGON'S HEAD
380	GORGONEA TERTIA	2	(A)	WRIST OF THE PLEIADES
391	MISAM AL THURAYYA I	2	(L)	FOURTH STAR IN THE GORGON'S HEAD
382	GORGONEA GUARTA	2	(N)	?
393	ANKAA	2	(A)	THE YOUNG OSTRICHES
384	ALRIAL III	2	(A)	THE YOUNG OSTRICHES
395	ALRIAL V	2	(A)	THE YOUNG OSTRICHES
396	ALRIAL I	2	(A)	THE YOUNG OSTRICHES
397	ALRIAL III	2	(A)	THE YOUNG OSTRICHES
388	ALRIAL IV	2	(A)	THE YOUNG OSTRICHES
399	KAPTEYN'S STAR	2	(L)	THE CORD
390	ALRESCHA	1	(A)	FISH'S MOUTH
391	FUM AL SAMAKA-I	2	(P)	CORD
392	KUTON I	2	(P)	CORD
393	KUTON II	2	(P)	CORD
394	KUTON III	2	(L)	THREAD
395	TORCULAR	1	(A)	FISH'S MOUTH
396	FCMALHAIR	1	(A)	FISH'S MOUTH
397	FUM AL HUT I	2	(A)	FISH'S MOUTH
398	FUM AL HUT II	2	(A)	FISH'S MOUTH
399	MERKEB (A)	3	(A)	SADDLE
400	MERKEB (B)	3	(A)	SADDLE

TABLE 7 CONTINUED  
APPROXIMATE TRANSLATION OF STAR NAME

NUMBER	PROPER NAME	REF.	DER.	TRANSLATION
401	NAOS	2	(A)	SHIP
402	AZMIDISKE	3	(G)	ORNAMENTAL APLUSTRE
403	SHAM	3	(M)	?
404	TEREBELLUM III	2	(L)	?
405	TEREBELLUM IV	2	(L)	ARCHER'S KNEE
406	RUKBAT	1	(A)	TENDON OF A FOOT
407	ARKAS PRIOR	1	(A)	TENDON OF A FOOT
408	ARKAS POSTERIOR	1	(A)	THE POINT
409	ALNASL	1	(A)	THE MIDDLE OF THE BOW
410	KAUS MEDIA	1	(L)	SOUTHERN PART OF THE BOW
411	KAUS AUSTRALIS	1	(L)	THE ARMPIT
412	ASCELLA	1	(L)	THE LEAVING OSTRICHES
413	NAMALWARID	2	(L)	NORTHERN PART OF THE BOW
414	KAUS BOREALIS	1	(L)	THE OSTRICHES
415	ALNAM	2	(A)	THE ARCHER'S EYE
416	AIN AL RAMI I	2	(A)	THE ARCHER'S EYE
417	AIN AL RAMI II	2	(A)	THE CITY
418	AIN AL RAMI III	2	(A)	STAR OF THE PROCLAMATION OF THE SEA
419	AL BALDAH	2	(A)	THE RETURNING OSTRICHES
420	NUNKI	1	(E)	THE RETURNING OSTRICHES
421	NAMALSA DIRAH II	2	(A)	THE RETURNING OSTRICHES
422	NAMALSA DIRAH I	2	(A)	THE RETURNING OSTRICHES
423	NAMALSA DIRAH III	2	(A)	THE RETURNING OSTRICHES
424	NAMALSA DIRAH IV	2	(A)	THE NECKLACE
425	AL KILADAH	2	(A)	?
426	TEREBELLUM I	2	(L)	SIMILAR TO MARS
427	ANTARES	1	(G)	CRAB
428	GRAFFIAS (AB)	1	(G)	CRAB
429	GRAFFIAS (C)	1	(G)	THE FORE-HEAD
430	OSC-JUBBA	1	(A)	SMITTER?
431	SARGAS	2	(E)	STINGER
432	GIRTAB	2	(P)	STINGER
433	VANANT	2	(D)	THE ROOT
434	MULA	1	(A)	THE STING
435	SHAULA	1	(A)	THAT WHICH FOLLOWS THE STING
436	TALI AL SHAULA I	2	(A)	THAT WHICH FOLLOWS THE STING
437	TALI AL SHAULA II	2	(A)	THE FORE-HEAD
438	JABBAH (B)	2	(A)	THE FORE-HEAD
439	JABBAH (A)	2	(A)	THE FORE-HEAD
440	GRASSIAS (A)	2	(G)	CRAB
441	GRASSIAS (B)	2	(G)	CRAB
442	NUR	2	(P)	BRIGHT
443	ICLIL	2	(A)	CROWN OF THE FORE-HEAD
444	ALNIYAT I	2	(A)	OUTWORKS OF THE HEART
445	ALNIYAT II	2	(A)	OUTWORKS OF THE HEART
446	LESAT	1	(A)	THE STING
447	JAB-HAT ACRABI I	2	(A)	THE FORE-HEAD OF THE SCORPION
448	JAB-HAT ACRABI II	2	(A)	THE FORE-HEAD OF THE SCORPION
449	UNUKAL-HAI	1	(A)	THE NECK OF THE SNAKE
450	NASAK SHAMIYA I	2	(A)	NORTHERN BOUNDARY

TABLE 7 CONTINUED  
APPROXIMATE TRANSLATION OF STAR NAME

NUMBER	PROPER NAME	REF.	DER.	TRANSLATION
451	NASAK SHAMIYA II	2	(A)	NORTHERN BOUNDARY
452	NASAK YAMANI I (B)	2	(A)	SOUTHERN BOUNDARY
453	NASAK YAMANI I (A)	2	(A)	SOUTHERN BOUNDARY
454	NASAK YAMANI II	2	(A)	SOUTHERN BOUNDARY
455	ALYA (A)	1	(A)	THE SNAKE
456	ALYA (B)	1	(A)	THE SNAKE
457	CALAENO	1	(L)	ONE OF THE SISTERS (PLEIADES)
458	ELECTRA	1	(L)	ONE OF THE SISTERS (PLEIADES)
459	MAIA	1	(L)	ONE OF THE SISTERS (PLEIADES)
460	STEROPE I	1	(L)	ONE OF THE SISTERS (PLEIADES)
461	STEROPE II	2	(L)	ONE OF THE SISTERS (PLEIADES)
462	MEROPE	1	(L)	ONE OF THE SISTERS (PLEIADES)
463	PLEIONE	1	(L)	MOTHER OF THE SISTERS (PLEIADES)
464	ATLAS	1	(L)	FATHER OF THE SISTERS (PLEIADES)
465	TAYSETA	1	(L)	ONE OF THE SISTERS (PLEIADES)
466	ALDEBARAN	1	(A)	THE FOLLOWER
467	ELNATH	1	(A)	THE BUTTING ONE
468	HYADUM I	2	(L)	BROTHER OF THE SISTERS (PLEIADES)
469	HYADUM II	2	(L)	ROTHER OF THE SISTERS (PLEIADES)
470	OCULUS BOREUS	2	(L)	NORTHERN EYE
471	ALCYONE	1	(L)	ONE OF THE SISTERS (PLEIADES)
472	HYADUM III	2	(L)	BROTHER OF THE SISTERS (PLEIADES)
473	HYADUM IV	2	(L)	ROTHER OF THE SISTERS (PLEIADES)
474	ALKALBAIN III	2	(A)	TWO DOGS
475	ALKALBAIN IV	2	(A)	TWO DOGS
476	ALKALBAIN V	2	(A)	TWO DOGS
477	ALKALBAIN I	2	(A)	TWO DOGS
478	ALKALBAIN II	2	(A)	TWO DOGS
479	CAPUT TRIANGULI	2	(L)	END OF THE TRIANGLE
480	MIZAN	2	(A)	SCALE-BEAN
481	AIRIA	2	(D)	A SAGE
482	FLYING STAR	2	(D)	
483	AL-IBA I	2	(A)	THE GAZELLE
484	AL-IBA VII	2	(B)	THE GAZELLE
485	ALHAUD III	2	(A)	THE POND
486	ALHAUD I	2	(A)	THE POND
487	ALCOR	1	(A)	FAIN ONE
488	ALHAUD IV	2	(A)	THE POND
489	DUB-E	1	(A)	THE BEAR
490	MERAK	1	(A)	THE LOIN
491	PHECOA	1	(A)	THE THIGH
492	NEGREZ	1	(A)	THE ROOT OF THE TAIL
493	ALIOTH	1	(A)	FAT TAIL OF THE EASTERN SHEEP
494	MIZAR (A)	1	(A)	GIRODE
495	MIZAR (B)	1	(A)	CHIEF OF THE MOURNERS
496	ALKAIID	1	(A)	THE POND
497	ALHAUD V	1	(A)	THIRD LEAP
498	TALITHA	2	(A)	THIRD LEAP
499	KAFZATAANIA	1	(A)	NORTHERN SECOND (LEAP)
500	TANIA BOREALIS	1		

TABLE 7 CONTINUED  
APPROXIMATE TRANSLATION OF STAR NAME

NUMBER	PROPER NAME	REF.	DEF.	TRANSLATION
501	TANIA AUSTRALIS	1	(A)	SOUTHERN SECOND (LEAP)
502	ALULA BOREALIS	1	(A)	NORTHERN FIRST (LEAP)
503	ALULA AUSTRALIS	1	(A)	SOUTHERN FIRST (LEAP)
504	MUSCIDA	1	(N)	MUZZLE OF AN ANIMAL
505	ALTHIBA II	2	(A)	THE GAZELLE
506	ALTHIBA III	2	(A)	THE GAZELLE
507	ALTHIBA IV	2	(A)	THE GAZELLE
508	ALTHIBA V	2	(A)	THE GAZELLE
509	ALTHIBA VI	2	(A)	THE GAZELLE
510	ALHAUD I	2	(A)	THE POND
511	ALHAUD VI	2	(A)	THE POND
512	ALHAUD VII	2	(A)	THE POND
513	ALKAFZAI	2	(A)	THE LEAF
514	POLARIS	1	(L)	POLE (STAR)
515	KOCHAB	1	(A)	STAR
516	PHERKAD MINOR	1	(A)	TWO CALVES
517	PHERKAD MAJOR	1	(A)	TWO CALVES
518	YILDUN	2	(T)	STAR PAR EXCELLENCE
519	CIRCITORES	2	(L)	CIRCLES
520	AKFA FARKADAIN	2	(A)	DIM ONE OF THE TWO CALVES
521	ANWA FARKACAIN	2	(A)	BRIGHT ONE OF THE TWO CALVES
522	REGOR	1	(N)	?
523	MARKEB	2	(A)	SADDLE
524	SU-HAIL	2	(A)	THE PLAIN
525	SPICA	1	(L)	EAR OF WHEAT
526	ZAVIJAVA	1	(A)	ANGLE OR CORNER
527	PORRIMA	1	(L)	ANCIENT GODDESS OF PROPHECY
528	MINELAUVA	1	(A)	THE BARKER
529	VINDEMIA TRIX	2	(L)	GRAPE-GATHERER
530	HEZE	3	(N)	?
531	ZANI AH	1	(A)	ANGLE OR CORNER
532	SYRMA	1	(S)	TRAIN OF THE VIRGIN'S ROBE
533	ALGAFAR I	2	(A)	THE TUFT IN THE LION'S MANE
534	KAMBALIA	2	(C)	CROOKED CLAW
535	RIGILAUVA	2	(A)	FOOT OF THE BARRIER
536	ALGAFAR II	2	(A)	THE TUFT IN THE LION'S MANE
537	ANSER	2	(N)	?